APPENDIX I: BASELINE INFORMATION

Baseline information on Washington State is available in the 2001 Washington State Data Book: http://www.ofm.wa.gov/databook/index.htm

The following data are from year 2000.

Population: **5,894,121**

Average age of population: **35.3 years**

Percent of population living in poverty (<100% FPL): **11.9%**

Primary Industries: **Agriculture, Forestry, Fishing, Mining, Manufacturing, Construction, Transportation, Wholesale/Retail, Financial/Insurance/Realty Services**

Number and percent of employers offering coverage: **63.4%**

Insurance market reforms: http://www.insurance.wa.gov/newsrel/6067facts.htm

APPENDIX II: LINKS TO RESEARCH FINDINGS AND METHODOLOGIES

Most of the information regarding our research work has been posted to our website at, http://www.ofm.wa.gov/accesshealth/accesshealth.htm as it becomes available.

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APPENDIX III: SECTION 2 EMPLOYER-BASED COVERAGE

Washington State Planning Grant on Access to Health Insurance

Distribution of Workers in Washington, 2000
by Characteristics of Business
(Excerpted from draft consultant report on Profiles of Washington's Uninsured) *

Characteristic of business	All Business	Low wage Business (a)	Other Business (b)	Small Business (c)	Large Business (d)
Size of firm					
Fewer than 10 workers	22.0	30.4	19.9	51.2	0.0
10-50	21.0	24.7	20.1	48.8	0.0
50 or more	57.0	44.9	60.0	0.0	100.0
Low-wage business	20.0	100.0	0.0	25.6	15.7
Other business	80.0	0.0	100.0	74.4	84.3
Employs mostly part-time workers (e)	5.6	88.7	95.8	92.5	95.7
Employs less half part-time workers	94.4	11.3	4.2	7.5	4.3
Seasonal business (f)	5.4	9.4	4.4	4.7	5.9
Not seasonal	94.6	90.6	95.6	95.3	94.2
Has union workers	27.5	4.6	16.7	4.3	45.1
No union workers	72.5	95.4	33.2	95.7	54.9
Employs predominantly young workers (g)	22.2	41.5	17.5	27.4	18.5
Other business	77.7	58.5	82.5	72.6	81.5
Employs mostly female workers (h)	7.1	17.8	4.4	9.1	5.6
Other business	92.0	82.2	95.6	90.9	94.4

(a) at least 2/3 of workers in the business earn less than $10 per hour

(b) fewer than 2/3 of workers in the business earn less than $10 per hour

(c) business employs 50 or fewer workers

(d) business employs more than 50 workers

(e) at least half of workers in the business work fewer than 20 hours per week

(f)   half of workers in the business are temporary or seasonal

(g) more than 30 percent of workers in the business are less than age 30, and no workers are older than 50

(h) at least 90 percent of workers in the business are female

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Washington State Planning Grant on Access to Health Insurance

How the Self-Sufficiency Standard Is Calculated

(Excerpted from draft consultant report of Income Adequacy and the Affordability of Health Insurance in Washington State as found in *The Self-Sufficiency Standard for Washington State*, by Pearce, Diana. September, 2001.) *

The goal of making the Standard as standardized and accurate as possible, yet varied geographically and by age, requires meeting several different criteria. As much as possible, the figures used here:

1. are collected or calculated using standardized or equivalent methodology,

2. come from scholarly or credible sources, such as the U.S. Bureau of the Census,

3. are updated at least annually, and

4. are age- and/or geographically-specific (where appropriate).

Thus, costs that rarely have regional variation (such as food) are usually standardized, while costs such as housing and childcare, which vary substantially, are calculated at the most geographically- specific level available.

For each county or sub-county area in Washington, the Self-Sufficiency Standard is calculated for 70 different family types—all one-adult and two-adult families, ranging from a single adult with no children, to one adult with one infant, one adult with one preschooler, and so forth, up to two-adult families with three teenagers. The costs of each basic need and the Self-sufficiency Wages for all 70 family types for all geographic areas may be found in the Full Report. We have included the costs of each basic need and the Self-sufficiency Wages for eight selected family types for each county in Washington in the Appendix to this report.

The components of the Self-sufficiency Standard for Washington and the assumptions included in the calculations are described below.

Housing: The Standard uses the Fiscal Year 2001 Fair Market Rents for housing costs, which are calculated annually by the U.S. Department of Housing and Urban Development for every metropolitan housing market and non-metropolitan county (totaling over 400 housing market areas). Fair market rents are based on data from the decennial census, the annual American Housing Survey, and telephone surveys.[1] The Fair Market Rents (which include utilities except telephone and cable) are intended to reflect the cost of housing that meets minimum standards of decency, but is not luxurious. They reflect the cost of a given size unit at the 40th percentile level. (At the 40th percentile level, 40 of the housing in a given area would be less expensive than the FMR, while 60% would cost more than the FMR.

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[1] These costs are based on a survey of units that have been on the market within the last two years, and exclude new housing (two years old or less), and substandard public housing.

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The Standard has recently incorporated Payment Standards, which are adjustments to the FMR by local Public Housing Authorities (PHA). Each PHA has the authority to vary their payment standards by a range of 90-110%, based on the local market, and may do so in specific areas and even by size of unit. If there is a need to adjust the FMRs even further (above 110), the PHA may seek the required approval from the state's HUD office for an "exception" rent. Most exception rents are 120, or the 50th percentile, but they are defined as anything over 110%.

The Self-sufficiency Standard assumes that parents and children do not share the same bedroom and that there are not more than two children per bedroom. Therefore, the Standard assumes that single persons and couples without children have one-bedroom units;[2] families with one or two children require two bedrooms, and families with three children, three bedrooms.

Childcare: The Standard uses the most accurate information available that is recent, geographically-specific, and age- and setting- specific. In most states, this is the survey of childcare costs originally mandated by the Family Support Act, which provides the cost of childcare at the 75th percentile, by age of child and setting (family day care home, day care center, etc.).[3]

For Washington, the Standard uses the 3rd Quarter-Year 2000 Regional Market Rate (RMR) Ceilings, which are based on the results of a statewide survey of over 8,400 childcare providers conducted by the Washington State Childcare Resource and Referral Network. The rates given are the DSHS reimbursement rates and are specified by age, setting, and county.

Because it is more common for very young children to be in day care homes rather than centers,[4] the Standard assumes that children less than three years of age (infants and toddlers, called "infants" here) receive full-time care in day care homes. Preschoolers (three through five years old), in contrast, are assumed to go to day care centers full-time. School-age children (ages six to 12) are assumed to receive part-time care in before- and after-school programs.

Food: Although the Thrifty Food Plan is used as the basis of both the poverty thresholds and the Food Stamps allotments, the Standard uses the Low-Cost Food Plan for food costs.[5] While both of these USDA diets meet minimum nutritional standards, the Thrifty Food Plan was meant for emergency use only, while the Low-Cost Food Plan is based on more realistic assumptions about food preparation time and consumption patterns. Although the Low-Cost Food Plan amounts are

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[2] Because of the lack of availability of efficiencies in some areas, and their very uneven quality, it was decided to use one-bedroom units for the single adult and childless couple.

[3] Under the 1988 Family Support Act (which was superceded by the Personal Responsibility and Work Opportunity Reconciliation Act, passed in 1996), states were required to fund or reimburse child care needed by those on welfare (or leaving welfare) at market rate, which was defined as the 75th percentile, for the age of child, setting, and location. Most states conducted surveys of costs, or commissioned child care referral networks or researchers to do these studies.

[4] Child care centers are more frequently used for older children (two to four years old) than for infants (J.R. Veum and P.M. Gleason. October, 1991. "Child Care Arrangements and Costs." *Monthly Labor Review.* p. 10-17.) However, particularly for younger children and lower-income parents, relative care (other than the parent) accounts for significant amounts of child care for children under three (27% compared to 17% in family day care and 22% in child care centers). It should be noted that relative day care is usually, but not always, in the relative's home, and is usually, though not always, paid; thus it more closely resembles (and may actually be) day care homes rather than day care centers. For children three years and older, the predominant child care arrangement is the child care center, accounting for 45% of the care (compared to 14% in family child care, and 17% in relative care.) See J. Capizzano, G. Adams, and F. Sonenstein. March 2000. *Child Care Arrangements for Children under Five: Variation across States.* Washington, DC: The Urban Institute. National Survey of America's Families, Series B, No. b-7.

[5] Because the USDA does not produce annual averages for food costs, the Standard follows the Food Stamps Program and uses the costs for June as an annual average.

∗ The consultant deliverables containing this information are currently under review. Changes and refinements may occur so caution should be exercised using this draft product.

about 25 higher than the Thrifty Food Plan, they are nevertheless conservative estimates of the level of food expenditures required to meet nutritional standards. The Low-Cost Food Plan does not allow for any take-out, fast food, or restaurant meals, even though, according to the Consumer Expenditure Survey, average American families spend about 42 of their food budget on food eaten away from home. Again, the choice to use this food budget reflects what it costs to adequately meet nutritional needs, not consumer behavior.

The food costs in the Standard are varied according to the number and age of children and the number and gender of adults. Since there is little regional variation in the cost of food overall, the Standard uses the national average throughout the State of Washington.

Transportation: If there is an adequate public transportation system in a given area, it is assumed that workers use public transportation to get to and from work. A public transportation system is considered "adequate" if it is used by a substantial percentage of the population to get to work. According to one study, if about 7 of the total public uses public transportation that "translates" to about 30 of the low- and moderate- income population.[6] The city of Seattle is the only area in Washington in which substantial numbers of workers use public transportation to get to and from work, with nearly 16% of those in the city of Seattle using public transportation.

Elsewhere in the state, the proportion using public transportation is much less, and therefore it is not a reasonable assumption that workers would be able to get to work by public transportation. Therefore, we assume only workers living in the city of Seattle use public transportation. For all others, it is assumed that adults require a car to get to and from work; if there are two adults in the family, we assume two cars. (It is unlikely that two adults with two jobs would be traveling to and from the same place of work, at exactly the same time.)

Data for public transportation costs are based on the cost of a monthly pass for each adult. Private transportation costs are based on the costs of owning and operating an average car (or two cars, if there are two adults). The costs include the fixed costs of owning a car (including fire and theft insurance, property damage and liability, license, registration, taxes, repairs, and finance charges), in addition to monthly variable costs (e.g., gas, oil, tires, and maintenance), but do not include the initial cost of purchasing a car.

To estimate fixed costs, we use the Consumer Expenditure Survey amounts for families in the second quintile (those whose incomes are between the 20th and 40th percentile) of income, by region. In Washington, there are differences in costs by region, with auto insurance costing more in King and Pierce counties. Therefore, we varied the insurance portion of the fixed costs by a ratio computed from a study of insurance costs differentials done by the Office of the Insurance Commissioner for Washington and the gas cost based on AAA Surveys.[7] For varied costs, the Standard assumes that the car(s) will be used to commute to and from work five days per week, plus one trip per week per family for shopping for food and other errands. (The commuting distance is computed using the statewide average from the National Personal Transportation Survey). In addition, one parent in each household with young children is assumed to have a slightly longer weekday trip to allow for "linking" trips to the day care center or home.

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[6] See C. Porter and E. Deakin. December 1995. *Socioeconomic and Journey-to-Work Data: A Compendium for the 35 Largest U.S. Metropolitan Areas.* Berkely, CA: Institute of Urban and Regional Development, University of California at Berkely.

[7] *Premium Comparison of Largest Auto Insurance Writers in Washington.* Washington Insurance Commissioner's Office: www.insurance.state.pa.us/html/cauto.html

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Health Care: Health care costs in the Standard include both the employee's share of insurance premiums plus additional out-of-pocket expenses, such as co-payments, uncovered expenses (e.g., dental care and prescriptions), and insurance deductibles.

Although workers who do not have employer-provided health insurance often "do without," families cannot be truly self-sufficient without health insurance. The Self-Sufficiency Standard assumes that the employer provides health insurance coverage,[8] and that employees pay a portion of the premium for coverage (usually about one-fourth of the cost for employee only, and about one-third for family coverage).[9] The costs of health insurance in Washington are based on data from the Office of the Insurance Commissioner for Washington which was produced by the National Institute for Health Care Management. To capture the geographical differences in costs, we varied the health insurance premiums by a ratio computed from available HMOs through the Health Care Authority of Washington.

Data for out-of-pocket health care costs (by age) were obtained from the National Medical Expenditure Survey, adjusted by state using the Families USA report, *Skyrocketing Health Inflation: 1980-1993-2000*, and adjusted for inflation using the Medical Consumer Price Index (Medical CPI).

Miscellaneous: This expense category includes all other essentials such as clothing, shoes, paper products, diapers, nonprescription medicines, cleaning products and household items, personal hygiene items, and telephone. It does not allow for recreation, entertainment, or savings. Miscellaneous expenses are calculated by taking 10 of all other costs. This percentage is a conservative estimate in comparison to estimates in other basic needs budgets, which usually use 15%.[10]

Taxes: Taxes include state sales tax, federal and state income taxes, and payroll taxes. The retail sales tax varies by locality from 7.5 to 8.6, with no tax on food. Sales taxes are calculated only on "miscellaneous" items, as one does not ordinarily pay tax on rent, childcare, and so forth. (As is the case in many states, Washington does not tax services.) Indirect taxes, e.g., property taxes paid by the landlord on housing, are assumed to be included in the price of housing passed on by the landlord to the tenant. Also, taxes on gasoline and automobiles are included as a cost of owning and running a car.

State income taxes are calculated using the Commerce Clearinghouse State Tax Handbook as well as tax forms from the Washington Department of Revenue. The federal income tax calculation assumes the standard deduction and exemptions, and includes tax credits, both refundable and nonrefundable. There is no state income tax in Washington.

Payroll taxes for Social Security and Medicare are calculated at 7.65% of each dollar earned. Although the federal income tax rate is higher than the payroll tax rate—15% of income for families in this range—federal exemptions and deductions are substantial. As a result, families

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[8] According to the Bureau of Labor Statistics, 83% of non-temporary workers have health insurance provided through their employer.

[9] A. Foster Higgins & Co., Inc., *Tables: National Survey of Employer-Sponsored Health Plans, 1993-1996* (Princeton, NJ: A. Foster Higgins & Co., Inc., 1994-1997), and William M. Mercer, Inc., *Tables: National Survey of Employer-Sponsored Health Plans, 1997 and 1998,* (New York, NY: William M. Mercer, Inc., 1998 and 1999).

[10][10] See C. Citro and R. Michael, eds., *Measuring Poverty: A New Approach,* Washington, DC: National Academy Press, 1995.

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do not pay federal income tax on the first $10,000 to $ 12,000 or more, thus lowering the effective federal tax rate to 7% to 10% for many taxpayers.

Earned Income Tax Credit (EITC): The EITC, or as it is sometimes called, the Earned Income Credit, is a federal tax refund intended to offset the loss of income from payroll taxes owed by working-poor and near-poor families. The EITC is "refundable"; that is, working adults may receive the tax credit whether or not they owe any federal taxes, adding to their income.

Childcare Tax Credit (CCTC): The CCTC is a federal tax credit that allows working parents to deduct a percentage of their childcare costs from the federal income taxes they owe. Like the EITC, the CCTC is deducted from the total amount of money a family needs to be self-sufficient. Unlike the EITC, the federal CCTC is not a "refundable" tax credit. A family may only receive the CCTC as a credit against federal income taxes owed. Therefore, families who pay little or no federal income taxes, receive little or no CCTC.

Child Tax Credit (CTC): The CTC is a federal tax credit that allows parents to deduct up to $500 per child (for children less than 17 years old) from the federal income taxes they owe. If a family has one or two children, it is calculated like the CCTC, as a credit against federal taxes owed. If the family does not owe federal taxes, or has already taken the CCTC and there is no remaining liability (that is, no federal tax is owed after the CCTC is taken), then the family is not eligible for the CTC. However, if there are three or more children, then the CTC becomes refundable (as with the EITC). In this case, the family may receive the credit (up to $500 per child), even if they do not owe any federal taxes. However, the amount of CTC they receive is limited to the amount their payroll tax exceeds the EITC that they have or will receive. Starting in 2002, the CTC will be refundable for those with earnings over $10,000.

Given the high costs of childcare, most families with young children who pay market rate childcare offset most or all of the federal taxes they owe with their childcare tax credit. However, those with older children, or three or more children and higher incomes, are more likely to receive the CTC.

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Washington State Planning Grant on Access to Health Insurance

Methods For Developing Adjusted Standard

(Excerpted from draft consultant report on Income Adequacy and the Affordability of Health Insurance in Washington State) ∗

The purpose of the affordability analysis is to answer the primary question:

> **At what income level can family type *a*, living in county *b*, with health status *x* afford to buy coverage option *t* after paying for other basic living expenses?**

The analysis requires decisions about family type, geographic region, health status, and coverage options.

Family Type

From the 70 family types used to calculate the Self-Sufficiency Standard, we chose 12 family types for this analysis (Table 3). The basis for our selection was evidence about those family types most likely to be uninsured and those family types that represent large numbers of Washington families. For example, we included the single-adult family with no children to reflect the fact that young adults (ages 19-34) made up the largest proportion of the uninsured in Washington in 2000 (43.4 percent) and had the highest rate of uninsurance (16.5 percent) of any age category. The two-adult family with no children represents an age group (55-64) that accounted for another 6.5 percent of the uninsured population in 2000, with an uninsurance rate of 5.9 percent.

Table 3. Description of Family Types

Abbreviation	Family Type
1A	1 Adult (age 20), no children
1A, 1I	1 Adult (age 20), 1 infant
1A, 1S	1 Adult (age 30), school age child
1A, 1T	1 Adult (age 40), 1 teenager
1A, 1I, 1P	1 Adult (age 20), 1 infant, 1 preschooler
1A, 2S	1 Adult (age 30), 2 school age children
1A, 2P, 2S, 1T	1 Adult (age 40), 2 preschoolers, 2 school age children, 1 teenager
2A	2 Adults (age 55), no children
2A, 1I, 1P	2 Adults (age 30), 1 infant, 1 preschooler
2A, 2S	2 Adults (age 30), 2 school age children
2A, 2T	2 Adults (age 40), 2 teenagers
2A, 1P, 1S, 1T	2 Adults (age 40), 1 preschooler, 1 school age child, 1 teenager

Although the Standard does not distinguish among adults of different ages, health insurance premiums frequently do vary by age of adult. Therefore, we made assumptions about the ages of

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adults in each family type to reflect the likely mean age of low-income uninsured adults. These assumptions are included in Table 3.

Geographic Area.

We used the geographic areas defined by the Washington State Population Survey (WSPS). We selected these areas to be consistent with other pieces of our analysis in which we used income and other data from the survey. The SPS areas include three single-county areas (King, Clark, and Spokane counties) and five multiple-county areas (North Sound, West Balance, Other Puget Sound Metro, East Balance, and Yakima-Tri-Cities). In multiple county areas, we selected a single county from among the most populous counties, based on feedback from a variety of stakeholders. The counties we selected (Whatcom, Jefferson, King, Pierce, Clark, Chelan, Spokane, and Yakima), their median incomes, and the Standard for a single-adult family with an infant and a preschool child are listed in Table 4.

Table 4. Counties and Income Adequacy

Geographic Area	*Median Income*	Self-Sufficiency (1A, 1I, 1P)
1. North Sound: Whatcom	$42,272	$39,136
2. West Balance: Jefferson	$39,045	$35,815
3. King County	$62,735	$41,843
4. Other Puget Sound Metro: Pierce	$49,265	$38,318
5. Clark County	$53,418	$39,473
6. East Balance: Chelan	$35,500	$30,906
7. Spokane County	$41,795	$33,658
8. Yakima Tri-Cities: Yakima	$35,183	$32,357

Note: A=Adult, I=Infant, P= Preschool child
Source: 2000 State Population Survey Geographic Regions; Median Income by County (2001 Forecast).
www.ofm.wa.gov/poptrends/table16.pdf; Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.

Health Care Costs

Because we are interested in a measure of the affordability of specific health insurance options that may be available to low-income families, we substituted several of our own estimates of health care costs for the Standard's estimates. The Standard's health care cost estimates were based on data from the National Medical Expenditure Survey. Our estimates, like the Standard's figures, included both the share of premiums paid by families and their estimated out-of-pocket costs (e.g., deductible, copayments, uncovered services). We added our estimates of health care expenditures to the other living expenses in the Standard to calculate the Adjusted Self-Sufficiency Standard (the Adjusted Standard).

Coverage Options and Insurance Premiums

Premiums for health insurance vary by type of coverage. We wanted to include the major coverage options likely to be available to lower-income families in Washington. These include: Healthy Options, Basic Health (BH—subsidized and unsubsidized), BH+ (for children), State Children's Health Insurance Program (SCHIP), Washington State Health Insurance Pool (WSHIP), individual insurance, small-group insurance, and large-group insurance. For purposes

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of this analysis, we omitted the unsubsidized BH option on the grounds that this program is closed to new enrollees and will be for the foreseeable future. We omitted SCHIP on the grounds that it is a very small program, and most children will be covered through either Healthy Options or BH+. We also omitted the large-group insurance option on the grounds that it is more affordable because it typically has lower premium costs for a given set of benefits. We combined BH and BH+, assuming that families who are eligible for (and choose) BH can and would enroll their children in BH+. Finally, we assumed that only one adult from a family would be screened into WSHIP, while other family members would be covered by an individual product.

For individual coverage, we assumed that the family purchases a policy for each family member. For small-group coverage, we assumed that only one worker is covered per family, with additional family members (including other adults) covered as dependents. We assumed that employers pay 75 percent of the premium for single adults and 50 percent for dependents. This reflects the fact that small-group coverage typically subsidizes dependents less than employees.

In recognition of the fact that the very lowest-income level families may have access to non-health care subsidies (e.g., child care subsidies and food stamps), the two options that target these families are modeled in two ways: one assuming other subsidies and one assuming no other subsidies. Thus, the seven coverage options we modeled are:

1. Medicaid, no other subsidies

2. Medicaid, other subsidies (food stamps and child care, as used in the Pearce model)

3. BH/BH+, no other subsidies

4. BH/BH+, other subsidies (as above)

5. Small-group coverage

6. Individual coverage

7. WSHIP/Individual

We used premium data for the public programs from published program materials and telephone conversations with agency staff. For BH we calculated premiums based on the upper income level (175-199 percent FPL) with children eligible for no-cost BH+ coverage. For WSHIP we selected Plan 3—Network Plan (Non-Medicare) $500 deductible program. This option has the highest current enrollment (other than the Medicare option). WSHIP discounts for members over age 50 with income < 301% FPL and for members with continuous coverage were not included in our analysis.

For the individual coverage option we selected the Premera Personal Prudent Buyer Program Option 2—$500 deductible plan for non-smokers. This program is available in all but one county and represents a common plan design. We derived the premium figures from a carrier survey conducted by the study team for this project by William M. Mercer, Inc.

For small-group coverage we obtained information from several sources, including brokers and health plans. We developed an average plan and premium based on all sources of information. That plan design included a $200 deductible, 90 percent coinsurance, $15 copay per prescription, and a $2,500 out-of-pocket maximum. The baseline premium for 2001 is estimated at $210 per employee per month, $262.50 (25 percent more) for spouses, and $189 (90 percent of employee

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rate) for any number of children in a family. These factors and this rate tier structure are commonplace.

In general, health insurance premiums do not vary by geographic regions as small as counties. Healthy Options is free to all enrollees across the state. BH premiums are statewide (the lowest-cost plan was offered in all regions in 2001), and WSHIP premiums no longer vary by region. In the individual market there is some variation within some carriers. However, the program we selected has statewide premium rates. For the small-group market we believe the geographic variation in rates is small and overshadowed by other rating factors. One point estimate we were able to obtain showed less than a 5 percent variation across the regions of this study.

Health Status and Out-of-Pocket Expenses

Families incur out-of-pocket health care expenses in addition to premiums, including deductibles, copayments, and expenses for services that are not covered by insurance. In recognition of the fact that families whose members have different health status have different out-of-pocket expenses, we selected three levels of health status and made assumptions about their use of services.

Healthy: No out-of-pocket costs beyond the insurance premium

Average: Out-of-pocket costs were calculated as the sum of members' copayments, coinsurance, and deductibles divided by the total cost of health care including administration. For example, if every member had only one office visit with a $10 copay, the average out-of-pocket costs would be 1 percent of an annual premium of $1000.

Sick: Cost sharing for a sicker family member is somewhat more complex. In plans with out-of-pocket maximum caps for members, we used that amount as an upper level of out-of-pocket costs. For plans without such features, out-of-pocket costs could be (theoretically) infinite. Where caps on out-of-pocket expenses did not exist, we targeted the out-of-pocket costs for a member at the 90th percentile of total costs.

Because this is a family analysis, and in recognition of time and budget constraints, we assumed that all family members had the same health status for the healthy and average families. For the sick families, we assumed that two family members hit the out-of-pocket limit or 90th percentile. Although we recognize that this may not perfectly reflect many families' health status, it represents a reasonable compromise between the need for analytic simplicity and the complexity of reality.

When we assessed the out-of-pocket costs for the "sick" family in the WSHIP/Individual insurance option, we assumed that the WSHIP member and one other family member hit their out-of-pocket maximum limit. All out-of-pocket costs were calculated using standard actuarial procedures and tables representing health care utilization and cost per service for a commercially insured population.

Total Health Care Expenses

Health care premiums across coverage options and family composition vary from zero to $9064 for single-adult families (the latter figure is for a single adult in WSHIP and five children with individual insurance), and from zero to $9580 for two-adult families (the latter figure is for two adults, one of whom is in WSHIP and one of whom has individual insurance, and three children

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all of whom have individual insurance). Premiums for Medicaid coverage are zero for all family types and health status levels; out-of-pocket costs are zero for healthy families of all types and for all coverage options. Premiums for BH/BH+ are lower than the private options for all families. Premiums for individual coverage are lower than for small-group coverage for all single-adult families except the largest one; for two-adult families, relative premiums of the two options vary by family type. The WSHIP/Individual option's premium also varies in relation to the other private options, but it is frequently highest. Tables 5A through 5D give the estimates for premiums and out-of-pocket costs for all family types, all health status levels, and all five insurance programs.

Table 5A. Annual Health Care Costs for Private Coverage Options in One-Adult Publicly Insured Families, all Washington Counties

Family Type	Healthy Options			Basic Health		
	Premium	Out of Pocket	Total	Premium	Out of Pocket	Total
1 Adult						
Healthy	0	0	0	1555	0	1555
Average	0	0	0	1555	210	1765
Sick	0	0	0	1555	1300	2855
1 Adult, 1 infant						
Healthy	0	0	0	1555	0	1555
Average	0	0	0	1555	210	1765
Sick	0	0	0	1555	1300	2855
1 Adult, 1 school age child						
Healthy	0	0	0	1555	0	1555
Average	0	0	0	1555	210	1765
Sick	0	0	0	1555	1300	2855
1 Adult, 1 teenager						
Healthy	0	0	0	1994	0	1994
Average	0	0	0	1994	269	2263
Sick	0	0	0	1994	1300	3294
1 Adult, 1 infant, 1 preschool						
Healthy	0	0	0	1555	0	1555
Average	0	0	0	1555	210	1765
Sick	0	0	0	1555	1300	2855
1 Adult, 2 school age						
Healthy	0	0	0	1555	0	1555
Average	0	0	0	1555	210	1765
Sick	0	0	0	1555	1300	2855
1 Adult, 2 preschool, 2 school age, 1 teenager						
Healthy	0	0	0	1994	0	1994
Average	0	0	0	1994	269	2263
Sick	0	0	0	1994	1300	3294

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* The consultant deliverables containing this information are currently under review. Changes and refinements may occur so caution should be exercised using this draft product.

Table 5B. Annual Health Care Costs for Private Coverage Options in One-Adult Privately Insured Families, all Washington Counties

Family Type	Small Group			Individual			WSHIP/Individual		
	Premium	Out of Pocket	Total	Premium	Out of Pocket	Total	Premium	Out of Pocket	Total
1 Adult									
Healthy	2520	0	2520	1728	0	1728	2170	0	2170
Average	2520	408	2928	1728	526	2254	2170	374	2544
Sick	2520	3040	5560	1728	2680	4408	2170	1500	3670
1 Adult, 1 infant									
Healthy	4788	0	4788	2856	0	2856	3298	0	3298
Average	4788	776	5564	2856	869	3725	3298	718	4016
Sick	4788	6080	10868	2856	5360	8216	3298	4180	7478
1 Adult, 1 school age child									
Healthy	4788	0	4788	3216	0	3216	3861	0	3861
Average	4788	776	5564	3216	979	4195	3861	815	4676
Sick	4788	6080	10868	3216	5360	8576	3861	4180	8041
1 Adult, 1 teenager									
Healthy	4788	0	4788	3900	0	3900	4552	0	4552
Average	4788	776	5564	3900	1187	5087	4552	934	5486
Sick	4788	6080	10868	3900	5360	9260	4552	4180	8732
1 Adult, 1 infant, 1 preschool									
Healthy	4788	0	4788	3984	0	3984	4426	0	4426
Average	4788	776	5564	3984	1213	5197	4426	1061	5487
Sick	4788	6080	10868	3984	5360	9344	4426	4180	8606
1 Adult, 2 school age									
Healthy	4788	0	4788	4344	0	4344	4989	0	4989
Average	4788	776	5564	4344	1322	5666	4989	1159	6148
Sick	4788	6080	10868	4344	5360	9704	4989	4180	9169
1 Adult, 2 preschool, 2 school age, 1 teenager									
Healthy	4788	0	4788	8412	0	8412	9064	0	9064
Average	4788	776	5564	8412	2561	10973	9064	2308	11372
Sick	4788	6080	10868	8412	5360	13772	9064	4180	13244

Table 5C. Annual Health Care Costs for Private Coverage Options in Two-Adult Publicly Insured Families, all Washington Counties

Family Type	Healthy Options			Basic Health		
	Premium	Out of Pocket	Total	Premium	Out of Pocket	Total
2 Adults						
Healthy	0	0	0	6818	0	6818
Average	0	0	0	6818	920	7738

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* The consultant deliverables containing this information are currently under review. Changes and refinements may occur so caution should be exercised using this draft product.

Table 5C. Annual Health Care Costs for Private Coverage Options in Two-Adult Publicly Insured Families, all Washington Counties

Family Type	Healthy Options			Basic Health		
Sick	0	0	0	6818	2600	9418
2 Adults, 1 infant,						
1 preschool						
Healthy	0	0	0	3110	0	3110
Average	0	0	0	3110	420	3530
Sick	0	0	0	3110	2600	5710
2 Adults, 2 school age						
Healthy	0	0	0	3110	0	3110
Average	0	0	0	3110	420	3530
Sick	0	0	0	3110	2600	5710
2 Adults, 2 teenagers						
Healthy	0	0	0	3987	0	3987
Average	0	0	0	3987	538	4525
Sick	0	0	0	3987	2600	6587
2 Adults, 1 preschool, 1 school age, 1 teenager						
Healthy	0	0	0	3987	0	3987
Average	0	0	0	3987	538	4525
Sick	0	0	0	3987	2600	6587

Table 5D. Annual Health Care Costs for Private Coverage Options in Two-Adult Privately Insured Families, all Washington Counties

Family Type	Small Group			Individual			WSHIP/Individual		
	Premium	Out of Pocket	Total	Premium	Out of Pocket	Total	Premium	Out of Pocket	Total
2 Adults									
Healthy	5670	0	5670	8424	0	8424	9572	0	9572
Average	5670	919	6589	8424	2564	10988	9572	2206	11778
Sick	5670	6080	11750	8424	5360	13784	9572	4180	13752
2 Adults, 1 infant,									
1 preschool									
Healthy	7938	0	7938	6432	0	6432	7077	0	7077
Average	7938	1286	9224	6432	1958	8390	7077	1794	8871
Sick	7938	6080	14018	6432	5360	11792	7077	4180	11257
2 Adults, 2 school age									
Healthy	7938	0	7938	6432	0	6432	7077	0	7077
Average	7938	1286	9224	6432	1958	8390	7077	1794	8871
Sick	7938	6080	14018	6432	5360	11792	7077	4180	11257
2 Adults, 2 teenagers									
Healthy	7938	0	7938	7800	0	7800	8452	0	8452
Average	7938	1286	9224	7800	2374	10174	8452	2121	10573
Sick	7938	6080	14018	7800	5360	13160	8452	4180	12632

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Table 5D. Annual Health Care Costs for Private Coverage Options in Two-Adult Privately Insured Families, all Washington Counties

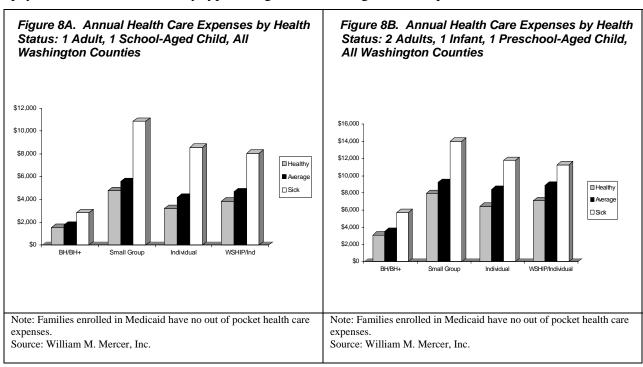| Family Type	Small Group			Individual			WSHIP/Individual		
	Premium	Out of Pocket	Total	Premium	Out of Pocket	Total	Premium	Out of Pocket	Total
2 Adults, 1 preschool, 1 school age, 1 teenager									
Healthy	7938	0	7938	8928	0	8928	9580	0	9580
Average	7938	1286	9224	8928	2718	11646	9580	2465	12045
Sick	7938	6080	14018	8928	5360	14288	9580	4180	13760

Total out-of-pocket health care expenses vary dramatically by family size, health status, and coverage option. Figures 8A and 8B illustrate this point for two family types. For the one adult/one school age child family type, sick families pay 267 percent of what healthy families pay for health care expenses with individual insurance. For the two adult/one infant/one preschool child family type, sick families pay 183 percent of what health families pay with individual coverage. For the single adult family type in Figure 8A, health care expenses for sick families with small-group coverage pay 381 percent of what sick families enrolled in BH/BH+ pay. For the two-adult family type in Figure 8B, that figure is 245 percent.

Figure 8A. Annual Health Care Expenses by Health Status: 1 Adult, 1 School-Aged Child, All Washington Counties

Note: Families enrolled in Medicaid have no out of pocket health care expenses.
Source: William M. Mercer, Inc.

Figure 8B. Annual Health Care Expenses by Health Status: 2 Adults, 1 Infant, 1 Preschool-Aged Child, All Washington Counties

Note: Families enrolled in Medicaid have no out of pocket health care expenses.
Source: William M. Mercer, Inc.

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Washington State Planning Grant on Access to Health Insurance

Measures of Income Adequacy

(Excerpted from draft consultant report on Income Adequacy and the Affordability of Health Insurance in Washington State) *

Federal Poverty Level

The need for an objective standard to assess income adequacy has led many policy makers to the official federal poverty measure. Using the federal poverty level, a family can be judged to be "poor" if its income is below the appropriate threshold and "not poor" if it is above the threshold. As Pearce (2001) points out, however, this measure has some significant limitations.

The federal poverty level was first developed in the early 1960s. It was based on the cost of a single item, food, and assumed a fixed ratio between food and all other components of families' living expenses (housing, clothing, etc.). This ratio, in turn, was based on spending patterns in the context of the dominant family composition of the time (two parent families with non-working wives), relative prices, and available products, housing stocks, and technology. The dollar amount of the FPL increases with family size.

Since the 1960s, the measure has been updated only for inflation, despite the fact that the composition of families has changed significantly, as has the context in which families make purchasing decisions. The needs of families with two working parents in particular—of whom there are many more today than in the 1960s—have changed to include child care for young children and transportation for the second worker. The FPL does not distinguish between families with one earner and two earners (or single-parent workers) despite the fact that these families have very different expenses associated with earning the same income.

An additional limitation of the FPL is that it does not vary by geographic location: it is the same for families in Republic or Seattle (as well as Mississippi and Manhattan). Although there was some geographic variation in costs even three decades ago, differences in the cost of living between areas have increased substantially since then, particularly in for housing. Housing in the most expensive areas of the country costs about four times as much as the same size units in the least expensive areas (Pearce, 2001). Finally, the FPL is increasingly viewed as simply too low, as evidenced by the fact that some public programs —including Medicaid in many states—set eligibility standards that are well over 100 percent of FPL.

Fifty Percent of Median Income

An alternative measure of income adequacy is 50 percent (or some other percentage) of median income. The advantage of this measure over the FPL is that is does vary by geographic region. In this report, we have measured the relevant geographic region by county. A significant limitation, however, is that median income is averaged over all family types. Thus, 50 percent of median county income is the same for a single-adult family as for a two-adult family with three children. Further, it does not take into account either levels or variations in living expenses by family type and geographic area.

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Full-Time Minimum Wage

Policy makers have set an income standard through the minimum hourly wage. Thus, another available income adequacy measure is this wage calculated at full employment for all adults in each family. The advantage of this measure is that it is based on legislative deliberation and varies with the number of workers in the family. However, the standard is statewide and, like median income, does not measure income in relation to living expenses or number of dependents.

The Self-Sufficiency Standard

A number of states have developed more sensitive measures of income adequacy by estimating basic living expenses for various family types and geographic areas. Researchers at the Josiah Bartlett Center for Public Policy in New Hampshire used mostly state-level data collected by various organizations to generate an estimate of a "livable wage" for seven family types for each New Hampshire county (Kenyon, 2000).[11] [12] Glazner (2001) used the same approach with 22 family types, but had to rely on national data from the Bureau of Labor Statistics Consumer Expenditure Survey (CES) for most expense categories. For health care expenditures, she combined health insurance premium data from Colorado's Alliance, a nonprofit membership organization that purchases health insurance for large and small employers, with CES data on non-covered health care expenses.

The Self-Sufficiency Standard, developed by Diana Pearce, is a similar measure of income adequacy (Pearce, 2001). The Self-Sufficiency Standard (the Standard):

> …measures how much income is needed, for a family of a given composition in a given place, to adequately meet its basic needs—*without public or private assistance.* By providing a measure that is customized to each family's circumstances, i.e., taking account of where they live, and how old their children are, the Self-Sufficiency Standard makes it possible to determine if a family's income is enough to meet its basic needs.

> The Standard does not try to combine, or average together, the very different circumstances of families in which adults work, compared to those in which they do not. Rather, the Self-Sufficiency Standard assumes that all adults (whether married or single) work full-time, and therefore, includes costs associated with employment, specifically transportation, taxes, and for families with young children, child care.

> The Standard takes into account that many costs differ not only by family size and composition, but also by the age of children. While food and health care costs are slightly lower for younger children, child care costs are much higher—particularly for children not yet in school—and are a substantial budget item not included in the official poverty measure.

> The Standard includes the net effect of taxes and tax credits. It provides for state sales taxes, as well as payroll (Social Security and Medicare) taxes, and federal and state income taxes. Three federal credits available to workers and their families are "credited"

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[11] Data for out-of-pocket health care expenditures were estimated from national survey data.
[12] Researchers in Maine used a very similar approach. See Pohlmann, St. John, and Kavanaugh (2000).

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* The consultant deliverables containing this information are currently under review. Changes and refinements may occur so caution should be exercised using this draft product.

against the income needed to meet basic needs: the Child Care Tax Credit, the Earned Income Tax Credit, and the Child Tax Credit.

While the poverty standard is based on the cost of a single item, food, and assumes a fixed ratio between food and nonfood, the Standard is based on the costs of each basic need, determined independently, which allows each cost to increase at its own rate. Thus, the Standard does not assume that food is always 33 percent of a family's budget, or constrain housing to 30 percent.

The Self-Sufficiency Standard is set at a level that is, on the one hand, not luxurious or even comfortable, and on the other, not so low that it fails to adequately provide for a family. Rather, the Standard provides income sufficient to meet minimum nutrition standards, for example, and to obtain housing that would be neither substandard nor overcrowded. The Standard does not, however, allow for longer-term needs, such as retirement, purchase of major items such as a car, or emergency expenses (except possibly under the "miscellaneous" cost category) (Pearce, 2001. pgs 1-4).[13]

The Standard is calculated for 70 different family types at the county (or in counties with distinct regions, the sub-county) level. It includes estimates of expenses in eight categories (see Table 1), including health care, taken from published sources.[14] Pearce and colleagues have calculated the Standard for a number of states, including Washington. Thus, the Standard, which has already been calculated for Washington State, provides a measure of income adequacy that is sensitive to family type and geographic variation.

Table 1. Expense Categories for Calculating the Self Sufficiency Standard

Housing	Health Care
Child Care	Miscellaneous
Food	Taxes
Transportation	Tax Credits

Comparisons

The four measures—federal poverty level, 50 percent of median income, full-time minimum wage, and the Self Sufficiency Standard—have different characteristics and draw upon different data. The Standard is greater than the FPL for all family types with children and all counties. Although FPL increases with family size, the Standard increases more rapidly. The Standard is also higher than 50 percent of median wage for the families with children for all counties; less for single-adult families. The latter result is expected because median income is averaged over families of all sizes. FPL is less than 50 percent of median income in all cases except for large two-parent families in Chelan County, where they are equal. Table 2 summarizes the differences with regard to variation by geographic region and family size.

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[13] The New Hampshire livable wage includes 5 percent for savings; the Colorado income measure includes educational expenses, non-health insurance and pension contributions, and other cash contributions such as alimony payments and charitable donations.
[14] A complete description of how the Standard is calculated appears in Appendix A.

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Table 2. Comparisons of Alternative Measures of Income Adequacy

Measure	Sources of Variation
Federal Poverty Level	- Varies by number of family members - Constant across counties
50% of County Median Income	- Varies by county - Constant across family types
Full-Time Earnings of Adults at Minimum Wage	- Varies by number of working adults - Constant across counties
Self-Sufficiency Standard for Washington State	- Varies by family type and county

Figures 1 through 4 illustrate these differences for FPL, 50 percent of median income, and the Self-Sufficiency Standard for three family types and four counties (Jefferson, Pierce [Tacoma], Chelan, and Spokane).

Figure 1. Comparison of Income Adequacy Measures: Pierce County

Note: A=Adult; I=Infant; P=Preschool age child
Source: 2001 Federal Poverty Guidelines (FPL). http://aspe.hhs.gov/poverty/01poverty.htm; Median Income by County (2001 Forecast) – http://www.ofm.wa.gov/poptrends/table16.pdf; Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.
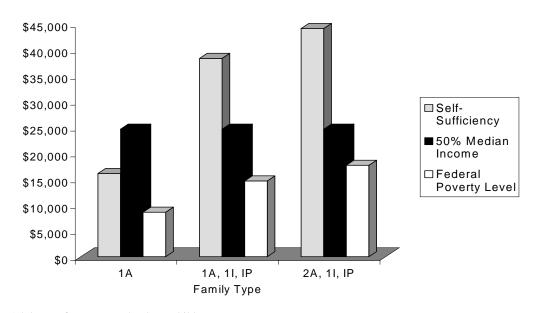
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Figure 2. Comparison of Income Adequacy Measures: Jefferson County

Note: A=Adult; I=Infant; P=Preschool age child
Source: 2001 Federal Poverty Guidelines (FPL). http://aspe.hhs.gov/poverty/01poverty.htm; Median Income by County (2001 Forecast) – http://www.ofm.wa.gov/poptrends/table16.pdf; Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.

Figure 3. Comparison of Income Adequacy Measures: Chelan County

Note: A=Adult; I=Infant; P=Preschool age child
Source: 2001 Federal Poverty Guidelines (FPL). http://aspe.hhs.gov/poverty/01poverty.htm; Median Income by County (2001 Forecast). http://www.ofm.wa.gov/poptrends/table16.pdf; Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.

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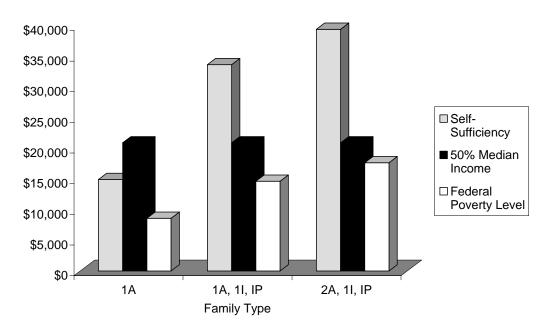
Figure 4. Comparison of Income Adequacy Measures: Spokane County

Note: A=Adult; I=Infant; P=Preschool age child

Source: 2001 Federal Poverty Guidelines (FPL) – http://aspe.hhs.gov/poverty/01poverty.htm; Median Income by County (2001 Forecast). http://www.ofm.wa.gov/poptrends/table16.pdf; Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.
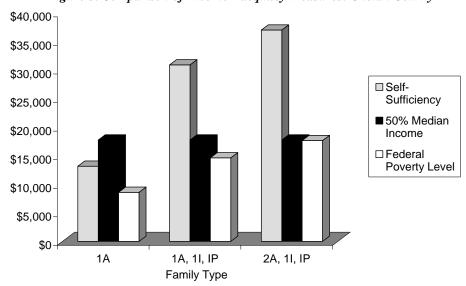
Figures 5 through 7 illustrate the differences among all four measures for three family types across eight counties.[15] The Standard is higher than the full-time minimum wage except for single adult families in Chelan County, where the two measures are roughly the same. However, the full-time minimum wage is greater than FPL in all counties for all family types except single adults with dependents. The latter result is predictable given that FPL increases with family size whereas full-time minimum wage only increases with additional workers.

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[15] Pearce's Self Sufficiency Standard used in Figures 5-7 is higher for King County than for Whatcom County, but the Adjusted Standard is sometimes higher for Whatcom County than for King County. This apparent anomaly is because the Self Sufficiency Standard is calculated for three sub-regions within King County (Seattle, Bellevue/Juanita/Kirkland/Redmond, and the balance of the county). The Standard in Figures 5-7 represents an amalgam of the entire county. However, we only calculated the Adjusted Standard for the Seattle sub-region recognizing that the uninsured population is concentrated in this area. In central King County (as opposed to the two other King County regions), Pearce's model assumes that families use public transportation at a cost of $45-$90 per month depending on family size, whereas families in the more rural Whatcom County, are assumed to use private transportation at a cost of $236-$416 per month, again depending on family size.

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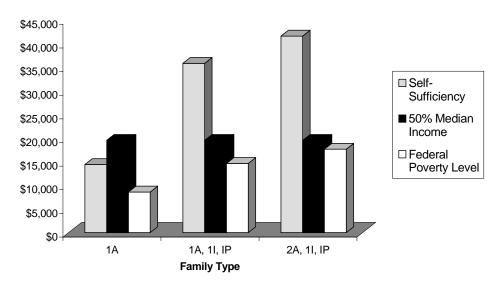
Figure 5. Comparison of Income Adequacy Measures: 1 Adult

Source: 2001 Federal Poverty Guidelines (FPL). http://aspe.hhs.gov/poverty/01poverty.htm (1/23/01); Median Income by County (2001 Forecast). http://www.ofm.wa.gov/poptrends/table16.pdf; Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.
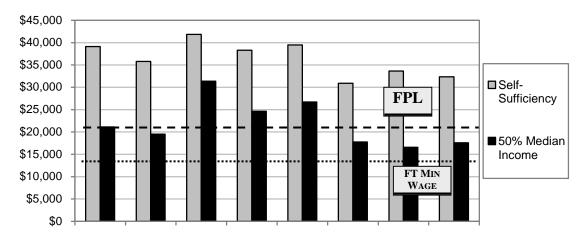
Figure 6. Comparison of Income Adequacy Measures: 1 Adult, 1 Infant, 1 Preschool-Aged Child

Source: 2001 Federal Poverty Guidelines (FPL). http://aspe.hhs.gov/poverty/01poverty.htm (1/23/01); Median Income by County (2001 Forecast). http://www.ofm.wa.gov/poptrends/table16.pdf; Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.

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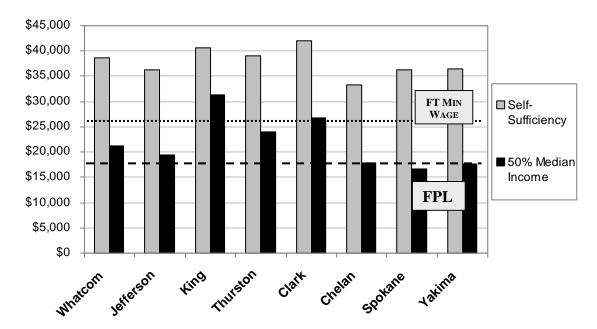
Figure 7. Comparison of Income Adequacy Measures: 2 Adults, 1 Infant, 1 Preschool-Aged Child

Source: 2001 Federal Poverty Guidelines (FPL) – http://aspe.hhs.gov/poverty/01poverty.htm (1/23/01); Median Income by County (2001 Forecast). http://www.ofm.wa.gov/poptrends/table16.pdf; Self-Sufficiency Standard for WA State, September 2001, by Diana Pearce, PhD.

Based on these comparisons, we selected the Self-Sufficiency Standard as our measure of income adequacy for this report. We wanted a measure that allowed us to consider both income and expenses and one that accounted for differences in these components across both family types and geographic regions. The Standard is the single measure among the four for which this is true.

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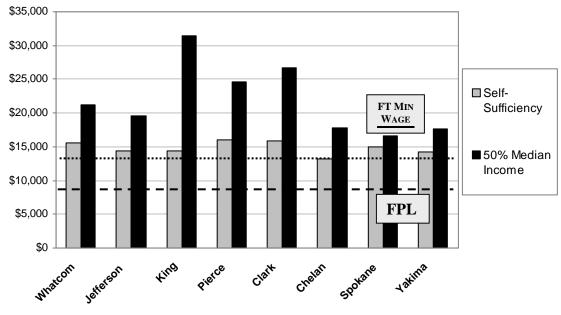
Washington State Planning Grant on Access to Health Insurance

Private Insurance Carrier Questionnaire

Name of Payer: _____   Contact Person: _____   Title of Contact: _____

Telephone Number: _____   Fax Number: _____   Email Address: _____

1. Please provide the following information about your private clientele in the State of Washington.

	Private Products Your Organization Insures				Private Products Your Organization Administers Only			
	Individual	Small Group	Large Group Products		Individual	Small Group	Large Group Products	
	Products	Products	Insured	Self-Insured	Products	Products	Insured	Self-Insured
Number of private benefit packages or plan designs								
Number of plan sponsors*	N/A				N/A			
Number of subscribers								
Covered members								
With no other insurance								
With other insurance								
Total								
Names of largest private benefit package/plan sponsors	N/A				N/A			

* E.g., private employers

2. On what basis does your organization define a "plan" or "product" as separate from other plans or products? (*Please check all applicable responses.*)

☐   Unique benefit package

☐   Separate plan sponsor(s)

☐   Specific other features (e.g., access to restrictive provider networks in certain locations)

☐   Other (*Please specify.*)

_____

_____

_____

3. What mechanisms does your organization use to identify different private plans? (*Please check all applicable responses.*)

☐   Unique plan identifiers (ID codes)

☐   Separate contracts

☐   Dedicated account representatives or teams

☐   Other (*Please specify.*)

_____

_____

_____

4. What services are generally not included as covered benefits in private products? (*Please check all applicable responses.*)

Services Generally Not Covered (Excluded)	Indivi-dual	Small Group	Large Group Products	
	Products	Products	Insured	Self-Insured
Basic vision benefits				
Care provided by relatives or household members				
Care that is the responsibility of another party, or covered under workers compensation				
Governmental services or services covered by (other) governmental plans				
Cosmetic services				
Dental care				
Experimental services				
Infertility-related care				
Private nursing				
Rental or purchase of luxury durable medical equipment				
Special education				
Other (*Please specify.*)				

5. Please show the most common non-prescription drug benefit features included in your private plans:

	Individual Products			Small Group Products			Large Group Products					
							Insured			Self-Insured		
	First Most Common	Second Most Common	Third Most Common	First Most Common	Second Most Common	Third Most Common	First Most Common	Second Most Common	Third Most Common	First Most Common	Second Most Common	Third Most Common
Deductibles												
Per individual	$	$	$	$	$	$	$	$	$	$	$	$
Per family	$	$	$	$	$	$	$	$	$	$	$	$
Coinsurance levels	%	%	%	%	%	%	%	%	%	%	%	%
Copays												
Office visit	$	$	$	$	$	$	$	$	$	$	$	$
Hospital admission	$	$	$	$	$	$	$	$	$	$	$	$
Other non-drug (*Please specify.*)	$	$	$	$	$	$	$	$	$	$	$	$
	$	$	$	$	$	$	$	$	$	$	$	$
	$	$	$	$	$	$	$	$	$	$	$	$
Internal plan limits on days, visits, procedures, dollars or other												
Mental health care	$	$	$	$	$	$	$	$	$	$	$	$
Chemical dependency care	$	$	$	$	$	$	$	$	$	$	$	$
Home health care	$	$	$	$	$	$	$	$	$	$	$	$
Skilled nursing facility care	$	$	$	$	$	$	$	$	$	$	$	$
Rehabilitation services	$	$	$	$	$	$	$	$	$	$	$	$
Other non-drug (*Please specify.*)	$	$	$	$	$	$	$	$	$	$	$	$
	$	$	$	$	$	$	$	$	$	$	$	$
Plan maximums (per lifetime)	$	$	$	$	$	$	$	$	$	$	$	$
Annual out-of-pocket limits												
Per individual	$	$	$	$	$	$	$	$	$	$	$	$
▪ Per family	$	$	$	$	$	$	$	$	$	$	$	$

6. What are your most frequent <u>prescription drug</u> cost-sharing approaches in private plans?

Private Plans	Individual Products		Small Group Products		Large Group Products			
					Insured		Self-Insured	
	In-Network	Out-of-Network	In-Network	Out-of-Network	In-Network	Out-of-Network	In-Network	Out-of-Network
Five most common cost-sharing arrangements (indicate brand vs. generic; formulary vs. non-formulary)								
First								
Second								
Third								
Fourth								
Fifth								

7. What are your most frequent in- and out-of-network benefit differentials in private plans?

Private Plans	Individual Products		Small Group Products		Large Group Products			
					Insured		Self-Insured	
	In-Network	Out-of-Network	In-Network	Out-of-Network	In-Network	Out-of-Network	In-Network	Out-of-Network
A. Five most common coinsurance arrangements (e.g., 90%/70%)	e.g., 90%	e.g., 70%						
First								
Second								
Third								
Fourth								
Fifth								
B. Five most common copay arrangements (e.g., $10/$25)	e.g., $10	e.g., $25						
First								
Second								
Third								
Fourth								
Fifth								

8. Please outline your primary gatekeeper (utilization management) requirements, and the types of benefits affected. (*Please check all applicable items.*)

Private Plans	Individual Products	Small Group Products	Large Group Products	
	e.g., mandatory pre-admission certification		**Insured**	**Self-Insured** *e.g., voluntary case management*
Hospitalization				
Selected diagnosis				
Selected treatment				
Non-formulary				
Other (*Please specify.*)				

9. With regard to your private group plans, please provide your minimum underwriting rules for insured groups.

Private Plans	Small Group (Insured)	Large Group (Insured)
Minimum number of hours employees must work to qualify for coverage	_____ hours per week	_____ hours per week
Minimum employer contribution toward employee coverage	_____ %	_____ %
Minimum employer contribution toward dependent coverage	_____ %	_____ %
Other (please summarize)		

10. What, if any are the major distinguishing features of private plans you offer in different parts of Washington?

Private Plans	Individual	Small Group	Large Group	
			Insured	**Self-Insured**
Northwest Washington				
Seattle Area				
Southwest Washington				
Northeast Washington				
Spokane Area				
Southeast Washington				

11. From your organization's perspective, what are the reasons certain features, and variations among them, become commonplace or unusual? (*1=most important reason, 2=second most important reason, etc.*)

- ▪ Insurance mandates _____

- ▪ Marketplace demands _____

- ▪ Ease in administration _____

- ▪ Ease in communicating _____

- ▪ Other (*Please specify.*) _____

We ask that you please forward the following with your completed questionnaire no later than November 16, 2001 to:

    Florence Katz
    William M. Mercer, Incorporated
    600 University Street, Suite 3200
    Seattle, WA 98101

- ▪ Sample plan element worksheet (listing of benefits) used by your underwriters and actuaries to price plans.
- ▪ Sample plan implementation worksheets used to define or program adjudication rules (both manual and automatic).
- ▪ A rate sheet and associated benefit summary for your *individual* market plan:
  – Of highest benefit value with significant enrollment
  – With the highest enrollment
  – Of lowest benefit value with significant enrollment.
- ▪ A rate sheet and associated benefit summary for your *small group* market plan:
  – Of highest benefit value with significant enrollment
  – With the highest enrollment
  – Of lowest benefit value with significant enrollment.

Thank you for your cooperation. If you have any questions, please contact Florence Katz at 206 808 8469 or florence.katz@us.wmmercer.com.

Washington State Planning Grant on Access to Health Insurance

Preliminary Summary of Responses to Private Insurance Carrier Questionnaire

(Excerpted from draft consultant report on Potential Policy Options for Enhancing Access to Health Insurance Coverage) *

About the Respondents

- Nine responses: 2 national carriers, 1 health care service contractor, 4 third party administrators (TPAs) for self-insured plans, 1 TPA/provider network; 1 health maintenance organization (HMO)
- Well over 14,500 plan sponsors represented (note: one major payer declined to provide this information)
- Over 875,000 subscribers and 1,850,000 members covered.

General Findings

- Relatively small number of plan designs offered, but there is a recognition that groups may have variations on these designs (note: one TPA indicated it administers 150 benefit packages [plan designs]). Plans/products are defined by having
    - o differentiated benefit packages and plan sponsors
    - o specific other features (special network, gatekeeper, or referral requirements)
    - o different ID/plan codes, contracts; sometimes account representatives and structures
- Many organizations have difficulty providing counts of members with and without dual coverage
- Typical exclusions

➢ cosmetic services	➢ infertility care
➢ dental care	➢ luxury DME
➢ experimental care	➢ private nursing
➢ family-provided services	➢ special education
➢ government services	➢ workers compensation/third party liability

- <u>Unweighted</u> deductible, coinsurance and copayment amounts (generally listed in order of frequency within top three payer-specified amounts). Please note that these listings are based on small number of responses, and incomplete responses from some payers.
    - ➢ most common deductibles – <u>individual</u>
        - individual, insured plans $500, $1,000
        - small group, insured $500, $200
        - large group, insured $300, $200[16]
        - large group, self-insured $0, $200, $300[1]
    - ➢ most common deductibles – <u>family</u>
        - individual, insured plans $1,500, $3,000
        - small group, insured $600, $1,500
        - large group, insured $600

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16 If POS plan, these deductibles would apply only to out-of-network services.

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* The consultant deliverables containing this information are currently under review. Changes and refinements may occur so caution should be exercised using this draft product.

- large group, self-insured $600, $300
- Coinsurance generally 80%/20% to 100%/0%, with 20% differential if PPO plan
- Copayments
  - office visits – $10, $15, $20
  - hospital admission – primarily $250 per admission or $100/per day for up to three days
  - emergency room visits – $50 or $75 per visit
- Benefit limits
  - mental health
    - outpatient – 10–50 visits, generally 20 visits
    - inpatient – 8–45 days, generally 30 days
  - chemical dependency
    - 30–60 days/visits
    - $10,000–$11,000 every two years (per WA State law)
  - home health care – 130 visits
  - skilled nursing facility
    - if defined by utilization, 30, 60 or 90 days per year
    - frequently only in lieu of hospitalization
  - rehabilitation
    - if defined by utilization, 60 days/visits or 90 days per year
    - if defined by payment, $1,500 per year for outpatient rehabilitation and $30,000 per condition
  - policy maximum – unlimited, $1,000,000, $2,000,000
- Annual out-of-pocket limited (in-network)
  - individual – $2,000, $1,000
  - family – $6,000, with range from $0 to $7,500
- Prescription drug cost sharing
  - little use of closed formularies
  - main generic copays – $5, $10, or $15
  - main formulary brand copays – $10 and $20
  - non-formulary brand copays – $25 or more
- Utilization management
  - still some focus on pre-admission certification and other inpatient review techniques
  - disease/case management
  - for drugs, voluntary formularies, step therapy requirements
- Underwriting requirements for groups (except for Taft-Hartley groups)
  - minimum hours – 17.5 hours per week (minimum); generally ranges from 17.5 to 30; Taft-Hartley groups may use monthly requirement
  - Employer contribution
    - for employees – 50% to 75%
    - for dependents – 0% or 50%

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* The consultant deliverables containing this information are currently under review. Changes and refinements may occur so caution should be exercised using this draft product.

Washington State Planning Grant on Access to Health Insurance

Administrative Simplification - Interview Protocol for Initial Inventory of Efforts

1. Name of interviewee
2. Title and workplace
3. Organization re: Administrative Simplification
4. Role in Organization
5. Recommended alternative/additional contacts:
6. Identification of the administrative simplification initiative (Name or label to which it is referred)
7. Description of initiative
8. Other initiatives under discussion/needed/considered
9. Leader/lead organization
10. Participants in the initiative
11. Location or locations of the initiative (single site, multiple sites)
12. Time Frame of initiative
13. Problem initiative is designed to address
14. Expected impact
    a. Savings of time
    b. Savings of money
    c. Reduce duplication of resource use
    d. Overall return on investment
    e. Examples:
15. Intended assessment of the initiative
    a. Anecdotal
    b. Evidence-based
    c. By whom
        i.   In-house
        ii. Outside
        iii. Formal
16. Barriers/constraints
    a. Government
        i.   State
        ii. Federal
        iii. Other
    b. System-wide barriers
        i.   Administrative infrastructure
    c. Money
17. State government role
    a. Current
    b. Potential
18. Follow-up opportunities
    a. Primary point of contact
    b. Meetings/forum
19. Overlaps with other initiatives
20. Category of administrative simplification – to be created from the results of the inventor

APPENDIX III: SECTION 5 CONSENSUS BUILDING STRATEGIES

Washington State Planning Grant on Access to Health Insurance

Guiding Principles

These guiding principles provide context for work conducted under the auspices of the state planning grant on access to health insurance. The bullets are not in any priority order.

In our approach to "doing the work of" the grant we are committed to:

- Seeking input and feedback in a low key but broadly inclusive manner
- Not advocating for any single approach
- Informing discussions through solid data and analysis
- Maintaining faith that there are good ideas yet to come
- Keeping expectations of the grant realistic – one step forward is one step better than nothing
- Doing work that is relevant for today's <u>and</u> tomorrow's circumstances
- Building on, being complementary to, and supporting efforts of others to address related issues
- Focusing our expertise and resources where they can be of greatest value
- Being informed and inspired by the experience and lessons of previous efforts
- Moving beyond "admiring" the problem

In researching options to address access, we are interested in ideas that:

- Include local / community control and accountability
- Seek to expand private/public partnerships
- Reduce existing system complexities
- Are incremental and focused, preferably within a context of longer-range solutions
- Maintain consumer protections and choice but allow for regulatory or statutory simplification
- Are voluntary and incentive-based
- Target specific barriers and gaps faced by specific groups
- Refocus, redirect, and maximize existing delivery and financial resources
- Retain valued aspects of the current delivery and financing systems
- Challenge historical and existing assumptions about programs and systems
- Assist in maintaining Washington's gains of the past

MAKING HEALTH CARE WORK FOR EVERYONE

Washington State Planning Grant on Access to Health Insurance

2001 WASHINGTON HEALTH LEGISLATIVE CONFERENCE

Civic Engagement and Health System Change:
The Power of People

Survey Results

Status of Health System in Washington State

Q1:   The health system in Washington State does a good job meeting the health needs of its citizens.

- Agree strongly   0.7%
- Agree   24.9%
- Disagree   46.9%
- Disagree strongly   8.4%
- Not sure   19.1%

Q2:   Of the problems listed below, what is the **single most pressing problem** in the health system, in your opinion? (Top 5 responses)

- Social and economic health disparities   17.2%
- Low Medicare/Medicaid payment rates to providers   16.1%
- Pressure on the state budget to cut publicly covered populations   12.1%
- The state's uninsured population   11.7%
- Other   10.6%

Health System Change

Respondents believe that the following variables can have great impact on the problem selected in Q2:

- Government   65.6%
- Private/public partnership   39.6%
- Health care marketplace   26.4%
- Individuals   21.6%

Power of the People- Direct Legislation

Q8:   In general, voter approved initiatives reflect what most people want their government to do:
- Agree strongly   5.5%
- Agree   29.3%
- Disagree   37.0%
- Disagree strongly   11.7%
- Not sure   16.1%

Q9: The initiative process is a good way to set state policy:

- Agree strongly   1.8%
- Agree   5.9%
- Disagree   31.9%
- Disagree strongly   47.6%
- Not sure   12.5%

The "Public" in Public Policy

Q10: What should be the goal of public involvement activities?

- Educate public about trade-offs in setting health policy   78.8%
- Provide a way for decision makers to learn needs/desires of the electorate   62.6%
- Forge consensus about what should be done to improve the health system   49.5%

Q11: What types of civic engagement activities have you participated in during the last six months on your own personal time:

- Voted in an election   92.3%
- Donated time/effort to a civic or religious organization   70.3%
- Attended a public/community meeting   67.0%
- Written a letter/sent an e-mail/talked with an elected official   64.1%
- Donated money to a political cause   56.9%

Access to Health Insurance

Q12: In terms of improving access to health insurance, which reform proposals would be the most *effective*?

- Create program of universal coverage for catastrophic or preventive care   44.0%
- Reform the insurance market   16.1%
- Broaden existing public program eligibility and/or financing   12.8%

Q13: Which proposals would be the most *politically viable*?

- Provide new financial incentives for employers to help employees   22.7%
- Provide new financial incentives for individuals/families to purchase plans   18.7%
- Encourage development of new or maximize existing purchasing pools   18.0%

Q14: Which segments of the uninsured population should be targeted for help?

- All segments should be treated equally   34.1%
- Individuals working in low wage industries   30.1%
- Low income children   30.1%

Washington State Planning Grant on Access to Health Insurance
2001 Washington Health Legislative Conference
December 4, 2001

Session -- The State Planning Grant on Access: Can We Talk?

SMALL GROUP DISCUSSION GUIDELINES

1.   Facilitator introduces him/herself
2.   Group selects a spokesperson
3.   Group members briefly scan lists of <u>potential targeted groups of uninsured</u> and <u>potential improvement-to-access options</u>.
4.   Discussion begins (and ends).

OVERARCHING QUESTION
Where do we go from here to make inroads on improving access to coverage?

SPECIFIC DISCUSSION QUESTIONS

1.   Which are the most viable options and highest priority groups of uninsured on which to focus?
2.   Why? (What criteria should be used to decide on viable options? On top priority groups?)
3.   Do the answers change if you think short-term (2002 through 2004) compared to long-term (2005 – 2010)?
4.   What are / will be the issues and barriers to carrying through on the foci you have identified?
5.   What single message sums up your group's thoughts regarding improving access to insurance coverage for Washingtonians?
6.   What "lack of knowledge" made this a difficult discussion?

Handout materials provided during the workshop are available at*:*
http://www.ofm.wa.gov/accesshealth/conference/conference.htm

STATE PLANNING GRANT (SPG) ON ACCESS TO HEALTH INSURANCE
OVERVIEW, January 15, 2002

SPG Accountable to Federal Government for:
1. Profile of Washington's uninsured
2. Options/strategies for improving access to affordable coverage and adequate benefits

Interim Report Due October 2001
Final Report Due March 2002

SPG + Communities: any single effort may represent small steps for small feet but collectively and eventually the efforts of many will turn into the **giant leap** needed for all

Washington SPG Research Work

❑ **Profiles** -- Detailed profiles of the uninsured population are being matched to detailed profiles of the current coverage and care pathways, including rigorous analysis of the gaps, overlaps and barriers.

❑ **Strategies** -- Analysis of the strengths and weaknesses of a universe of potential coverage and access options is being cross-walked to a similar analysis of strategies historically tried or in place in Washington (including, where appropriate and achievable, quantifiable impacts of strategies on specific uninsured and at-risk populations).

❑ **Linkages** -- Detailed assessment is being conducted of the links between identified gaps, overlaps, and barriers to coverage and care (in specific populations and circumstances) and the analysis of improvement strategies.

❑ **Individual Affordability** -- Significant energy is being devoted to understanding what individuals can afford to pay for coverage and care, compared to the reality of what's available to them. We consider this a "lynchpin" issue for crafting future coverage and access strategies.

❑ **System Affordability** -- Significant effort is also focused on administrative simplification strategies and partnerships, including options for reducing the currently complex array of insurance products (while still maintaining choice and variety). Creating a more affordable system via strategies that avoid unnecessary costs, reduce provider administrative burden, and set the stage for effective consumer-driven buying is directly relevant to improving access.

❑ **Community Partnerships** -- Building partnerships with community-based efforts and organizations addressing related issues is also a focus of our work. Mutual understanding of the issues faced, the solutions contemplated, and the flexibilities and accountabilities needed on all sides are part of this work.

Washington SPG Status

❑ **Deliverables** -- Working titles of deliverables to be received from consultant team by the end of February 2002 are:
- Data for Assessing Access to Health Insurance in Washington
- Profile of the Insured, Uninsured, and Insurance Affordability in Washington
- Enhancing Access to Health Insurance Coverage and Health Care: Policy Options for WA State.

❑ **Time Extension** –Year extension (through February 2003) requested in January 2002. Initial funding period was March 01 – February 02. High likelihood of approval. No additional funding is available so actual work may not extend beyond June or July 2002.

❑ **Extension Activities**: Examples of activities include
- Stakeholder input based on research findings provided by the consultants
- Refined quantitative analysis of findings based on public input
- Partnership building regarding coverage and simplification strategies

Visit us at: www.ofm.wa.gov/accesshealth/accesshealth.htm

Making Health Care Work for Everyone

Washington State Planning Grant on Access to Health Insurance

STAKEHOLDER WHO'S WHO

Management Oversight Panel and Governor's Sub-Cabinet on Health include representatives from:

- Department of Health
- Department of Social and Health Services – Medical Assistance Administration
- Health Care Authority
- Office of Financial Management
- Office of Insurance Commissioner
- State Board of Health

Stakeholders represent a broad range of organizations potentially interested in health care issues, including:

Accountable Care Technologies	Grays Harbor County Social & Health Services Dept
Aetna Inc.	Greater Seattle Chamber of Commerce
Alaska Air Group	Group Health Cooperative of Puget Sound
Alliances Northwest	Group Health Foundation
American Indian Health Commission	Harbor Pediatric Clinic
Associated Employers Trust	Health Care Authority
Association of Washington Business	Health Commons
Association of Washington Cities	Health Improvement Partnership
Association of Washington Healthcare Plans	Health Insurance Association of America
Basic Health Advisory Committee	Health Resources & Services Administration
Baldwin Resource Group	Hilke Faber and Associates
Ballard Chamber of Commerce	Human Links
Boeing	IDX Systems Corporation
Center for Medicaid and Medicare Services	Immunex Corporation
CEO Forum	Jamestown S'Klallam Tribe
Children's Alliance	Jefferson County Critical Access Project
CHOICE Regional Health Network	Joe King & Associates
CIELO	Johns-Brown Governmental Relations
Coastal/Med/Grays Harbor Regional Health System	Kaiser Foundation Health Plan of the Northwest
Columbia Legal Services	King County Health Action Plan
Community Choice PHCO: Provider Network	KMS Financial Services
Community Health Plan of Washington	Lehmann Wood & Associates
Community Innovations, Inc.	Liability Reform Coalition
ComPASS	Mark Reed Healthcare Clinic
Coulee Community Hospital	Mark Reed Hospital
D. Michener & Company	Mason General Hospital
Deborah E. Peterman & Associates, Inc	Medical Assistance Administration
Department of Corrections	Microsoft
Department of Health	Molina Healthcare of Washington, Inc.
Department of Labor & Industries	National Federation of Independent Business
Department of Social & Health Services	NEWMG/Colville Medical Center
Department of Veterans Affairs	Nordstroms, Inc
Economic and Social Research Institute	Noridian Government Services
Economic Opportunity Institute	Northeast Washington Medical Group
Employer's Health Purchasing Co-op	Northwest Portland Area Indian Health Board
Everett Clinic	NW Strategies
Friends of Basic Health	Office of Financial Management
Foundation for Health Care Quality	Office of the Attorney General
Freemont Public Association	Office of the Insurance Commissioner
GlaxoSmithKline	Olympia Family Medicine

Open Strategies
PACCAR, Inc
Pacific Public Affairs
PacifiCare of Washington
Peninsula Community Health Services
PHCO
Pike Market Medical Clinic
Pointshare
Premera Blue Cross
Providence Health Systems
Providence St. Peter Hospital
PROWest
Puget Sound Energy
RAND Corporation
Regence BlueShield
Rutgers University
SeaMar Community Health Center
Seattle Indian Health Board
Seattle King County Department of Public Health
Shelton Family Practice
Smith Kline Beecham
Sound Health Solutions
South Puget Intertribal Planning Agency
SPEEA
Spokane Tribe of Indians
Starbucks
State Board of Health
Stillaguamish Tribe
Swedish Health Services
Swedish Medical Center
Tacoma Pierce County Health Department
Terrill Lewis Wilke Insurance, Inc.
The Healthcare Decisions Group, LLC
The Meacham Group

The O'Connor Report
Thurston County Department of Public Health
University of Washington
Washington Association of Churches
Washington Association of Community and Migrant Health Centers
Washington Association of Counties
Washington Association of Health Underwriters
Washington Citizen Action
Washington Education Association
Washington Federation of State Employees
Washington Health Care Association
Washington Health Foundation
Washington Independent Business Association
Washington Policy Center
Washington Public Employees Association
Washington Rural Health Association
Washington State Congressional Delegation
Washington State Dental Association
Washington State Employment Security Dept
Washington State Hospital Association
Washington State Labor Council
Washington State Legislature
Washington State Medical Association
Washington State Nurses Association
Watson Wyatt Worldwide
Weyerhauser Company
William Meacham Insurance
William Mercer Inc.
WWAMI Center for Health Workforce Studies
Wyeth-Ayrst Laboratories
Yakima Chamber of Commerce
Yakima Medical Association
Yakima Valley Farm Workers Clinic

APPENDIX III: SECTION 6 LESSONS LEARNED AND RECOMMENDATIONS TO STATES

APPENDIX III: SECTION 7 RECOMMENDATIONS TO THE FEDERAL GOVERNMENT

APPENDIX III: SECTION 8 DATA FOR ASSESSING ACCESS TO HEALTH INSURANCE

Washington State Planning Grant on Access to Health Insurance

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Washington State Planning Grant on Access to Health Insurance

Overview of Existing Population-Based and Employer-Based Surveys Evaluated As Potential Data Sources for Washington's Research

(Excerpted from draft consultant report on Data for Assessing Access to Health Insurance Coverage in Washington State) *

Population-Based Surveys

Survey Name (Code)	Years Conducted (since 1990)	Sponsored By	Survey Design Features	Areas	Periodicity	Over-Sampled Populations	Public Use Data Available
Washington State Population Survey (WSPS)	1998, 2000 2002 (underway)	WA State Office of Financial Management	• Telephone survey of 6,726 Washington households in 2000; 7,279 Washington households in spring of 1998 • Non-institutionalized civilian population	WA and 8 sub-state areas	2 year intervals	Racial minority groups	Yes
Current Population Survey – March Supplement (CPS)	1990-on	Bureau of Labor Statistics and U.S. Census Bureau	• Personal and telephone interviews with 50,000 households nationally • Has been conducted for more than 50 years • Non-institutionalized civilian population	U.S., States, MSAs	Annual, each March	Hispanic households	Yes
Behavioral Risk Factor Surveillance System (BRFSS)	1994-present	Centers for Disease Control (CDC), U.S. Dept. of Health and Human Services	• State managed • Number of state stratified samples to allow regional estimates • 12,306 telephone interviews with monthly samples for all states (mean for states 237) • Allows examination of monthly trends • Representative of households with telephones • Non-institutionalized civilian population	U.S., States, some sub-state areas	Monthly		Yes

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Survey Name (Code)	Years Con-ducted (since 1990)	Sponsored By	Survey Design Features	Areas	Periodicity	Over-Sampled Populations	Public Use Data Available
Community Tracking Survey (CTS)	Household Surveys: 1996; 1998; 2000-1 data collection currently underway	Center for Studying Health Systems Change Robert Wood Johnson Foundation (RWJF)	• Primarily telephone interviews (with some in-person for families without telephones) of about 60,000 individuals in 33,000 families nationally • 12 sites randomly selected to serve as case study sites (n=300 each), 58 other communities • Families are defined as all individuals in a family that can be covered by a typical private health insurance policy (usually spouses and other dependents less than age 18). Questions were asked about all adults in the family as well as one randomly sampled child • Non-institutionalized civilian population	U.S. and 12 case study areas, including Seattle MSA	Two year intervals	"High need" individuals identified in the first round interview may be over-sampled in longitudinal sample	Yes
Robert Wood Johnson Foundation Family Health Insurance Survey (FHIS)	1993, 1997	The Robert Wood Johnson Foundation	• 1993: Telephone survey (in person interviews for those without telephones) in ten states with a total of 27,000 families. • 1997: Telephone survey (in person interviews for those without telephones) in WA State only plus a small in-person component • 5,322 families completed shorter version of interview, with data on health insurance coverage, employment and income, 2,537 completed full interview • Non-institutionalized civilian population for both years	1993 - 10 states including WA; 1997 WA only	Twice, but the 1997 survey instrument was slightly different	1993 over-sampled uninsured and Medicaid recipients; 1997 over-sampled uninsured, and Medicaid and BH enrollees	1993 yes. 1997 no. All data are available to WA State.

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Survey Name (Code)	Years Conducted (since 1990)	Sponsored By	Survey Design Features	Areas	Periodicity	Over-Sampled Populations	Public Use Data Available
National Medical Expenditure Panel Survey-Household Component (MEPS-HC)	1996, 1997, 1998	Agency for Healthcare Research and Quality, National Center for Health Statistics/ U.S. Department of Health and Human Services	• In person interviews • Links its components to the National Health Interview Survey, which enhances the analytic capabilities of both surveys • 10,500 families and 24,000 individuals nationally • Six rounds of interviews over 2 years • Linked to survey of employers • Non-institutionalized civilian population	U.S. and regions	Annual	Policy relevant population subgroups, such as functionally impaired adults, children with activity limitations, expected high-cost individuals, expected low-income families, Hispanics and African Americans	Yes
National Health Interview Survey (NHIS)	1990-on; redesign in 1995	National Center for Health Statistics/ U.S. Department of Health and Human Services	• Continuing national survey utilizing a stratified multi-stage sample design • 36,000 to 47,000 households per year, including approximately 106,000 individuals nationally • Sample size is too small to support state estimates • Non-institutionalized civilian population	U.S. and regions	Annual	African Americans and Hispanics	Yes
National Survey of American Families (NSAF)	1997, 1999	Urban Institute (Assessing the New Federalism) *Consortium of private funders	• Household telephone surveys • Non-telephone households included • 13 states and national samples • Over 44,000 households yielding information on over 100,000 people across the 13 states • 5,757 adults in WA; additional sample of "most knowledgeable adult" for children • Non-institutionalized civilian population	U.S. and 13 states including WA	Two year intervals	Below 200% poverty line (18,000 households – 52% of target sample)	Yes

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Survey Name (Code)	Years Con- ducted (since 1990)	Sponsored By	Survey Design Features	Areas	Periodicity	Over-Sampled Populations	Public Use Data Available
National Survey of Income and Program Participation (SIPP)	1990-on; redesign in 1996	U.S. Census Bureau	• Continuous series of national panels • 14,000 to 36,700 interviewed households nationally to form nationally representative sample • Each respondent is interviewed once every four months for 2.5 years, providing longitudinal data • Interviews conducted in person and by telephone • All household members 15 and over are interviewed by self-response; proxies are used as needed • Non-institutionalized civilian population	U.S. and regions (limited state est. possible)	Ongoing		Yes

Employer-Based Surveys

Survey Name (Code)	Years Conducted (Since 1990)	Sponsored By	Survey Design	Area	Likelihood of study continuing	Periodicity	Data Availability
Robert Wood Johnson Foundation Employer Health Insurance Survey (EHIS)	1993, 1997	The Robert Wood Johnson Foundation	• Primarily telephone interviews with a national probability sample of private and public employers • Samples of private employers selected from Dun's Market Identifiers • Excludes self-employed persons with no employees; excludes federal employers in 1993 • Data regarding state employees were obtained from each state government • Data regarding federal employees taken from U.S. Bureau of Labor Statistics and Office of Personnel Management (1997 only) • 1993-For public employers, a sample frame of "purchasing" units constructed based on consultation with state and	1993 - 10 states including WA 1997 – CTS sites, U.S. and several states, including WA	Unlikely	Twice	Data are available on a public access file

Survey Name (Code)	Years Conducted (Since 1990)	Sponsored By	Survey Design	Area	Likelihood of study continuing	Periodicity	Data Availability
			other government units • 1997-Local government sample drawn from the Census of Governments				
Medical Expenditure Panel Survey-Insurance Component (MEPS-IC)	1996 to present	Agency for Healthcare Research and Quality, U.S. Dept. of Health and Human Services	• For list sample: • Mail and telephone survey of business establishments and governments nationally • Nationally representative sample selected from the Census Bureau lists of business establishments and governmental units and IRS list of self employed persons • Follow-back (linked) sample of employers and other insurance providers of MEPS-HC participants Service list of the self-employed	Yes	Very likely	Annual	Some data are currently available for 1996-1998 studies Data are not available but sponsor provides detailed tables and responds to data requests, resources permitting

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Washington State Planning Grant on Access to Health Insurance

Factors Affecting the Precision of Survey Estimates: Sample Size and Design

(Excerpted from draft consultant report on Data for Assessing Access to Health Insurance Coverage in Washington State) *

Survey (Code)	Sample Design	Sample Size	Areas
WSPS	• Random digit dialing used to draw general population sample • General population sample is stratified into eight geographic regions (target for each region was 750 respondents) • Supplemental statewide samples of African Americans, Asians, Hispanics, and Native Americans were drawn from Census tracts containing the highest number of these groups	6,726 households in 2000	WA and 8 sub-state areas
CPS	• Multi-stage area-probability sampling • Panel design in which household is interviewed for 4 consecutive months, followed by an 8-month rest period, then interviewed for another four months • Replenish sample each month	64,990 households nationally	U.S., WA, other states (pooling years is recommended)
BRFSS	• Random digit dialing • Sampling strategy varies slightly from state to state.	More than 118,348 interviews nationally in 1998 In 2000, 3,584 interviews were conducted for WA	U.S., WA other states
CTS	• Random digit dialing • Includes a supplemental in-person sample to represent households without telephones • Nationally representative cross-sectional survey • Data are collected in 60 randomly selected communities nationwide • Twelve communities are selected to be case-study areas, including Seattle, WA	Nearly 33,000 families and over 60,000 individuals	U.S. and 12 case study areas, including Seattle MSA

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Survey (Code)	Sample Design	Sample Size	Areas
	WA.		
FHIS	• Random digit dialing • Supplemented by Medicaid and BH enrollee list samples • RDD sample was stratified based on geography and health insurance coverage, and uninsured were over-sampled • Included area probability sampling for non-phone households	Part 1: 5,322 families and 11,475 persons Part 2: 2537 families and 5871 persons	1993 covered 10 states including WA; 1997 covered only WA
MEPS-HC	• Multi-stage area probability sample • Rotating panel design; preliminary contact followed by six rounds of interviews over a 2 1/2 year period • New series launched each year to provide overlapping panels	Between 8,000 and 10,000 households per panel Every 5 years the sample size is increased	U.S. and regions
NHIS	• Multi-stage area probability sample	Approximately 43,000 households and 106,000 individuals	U.S. and regions
NSAF	• Random digit dialing • Included area probability sample of households without telephones	In 1999, 42,000 households and more than 109,000 non-elderly	U.S. and 13 states including WA
SIPP	• Multi-stage area probability sample • The duration of each panel ranges from 2 1/2 years to 4 years	14,000 to 36,700 interviewed households	U.S. and regions (limited state est. possible)

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Washington State Planning Grant on Access to Health Insurance

Population-Based Survey Support of Local Area Estimates

(Excerpted from draft consultant report on Data for Assessing Access to Health Insurance Coverage in Washington State) *

Survey	Geographic Areas			
	National	**Groups of States**	**Washington State**	**Sub-State Geographic Areas**
WSPS	No	No	Yes	Eight regions and the counties included in each: • **Clark**: Clark • **Other Puget Metro**: Kitsap, Pierce, Snohomish, Thurston; • **King**: King; • **Spokane**: Spokane; • **West Balance**: Clallam, Cowlitz, Grays Harbor, Jefferson, Klickitat, Lewis, Mason, Pacific, Skamania, Wahkiakum; • **Yakima-Tri-Cities**: Benton, Walla Walla, Yakima; • **North Puget Sound**: Island, San Juan, Skagit, Whatcom; • **East Balance**: Adams, Asotin, Chelan, Columbia, Douglas, Ferry, Franklin, Garfield, Grant, Kittitas, Lincoln, Okanogan, Pend Oreille, Stevens, Whitman..
CPS	Yes	U.S. Census Divisions and Regions	Yes[1]	Large Metropolitan Statistical Areas (MSAs), counties and cities[2]
BRFSS	Yes	Yes	Yes	Regions (estimates for children not supported)
CTS	Yes	No	No	Seattle and 11 non-Washington MSAs
FHIS	No	10 States	Yes	Multi-county areas by special arrangement[3]
MEPS-HC	Yes	U.S. Census Divisions and Regions	No	No
NHIS	Yes	U.S. Census Divisions and Regions	May be possible by special arrangement	No
NSAF	Yes	13 States	No	Multi-county areas by special arrangement[3]
SIPP	Yes	U.S. Census Divisions and Regions	Limited estimation possible[2]	No

[1] The Census Bureau recommends that state estimates be used with caution, as standard errors may be large. The Census Bureau published state estimates on a three-year average from the March CPS to create more stable estimates for making state-to-state comparisons.

[2] Estimates for these areas are possible, but may be unreliable due to large standard errors and sample design considerations. Estimates of common outcomes such as the proportion of persons with employer health insurance are more likely to be reliable than estimates of rare events (such as persons losing coverage after loss of a job).

[3] In principle, the sampling designs and sample sizes of these surveys permit estimation for multi-county sub-state areas. Sub-state identifiers are not available on public use data sets, but these might be available through special arrangement with survey sponsors.

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Washington State Planning Grant on Access to Health Insurance

Potential Sources of Survey Bias in Population Surveys

(Excerpted from draft consultant report on Data for Assessing Access to Health Insurance Coverage in Washington State) *

Survey (Code)	Response Rate	Respondent Selection	Interview Mode
WSPS	2000: • 43% for general population • 29% for expanded sample 1998 • 59% for general population • 43% for expanded sample	MKA: Most knowledgeable adult is interviewee; responds for self and all other members of household	Telephone
CPS	93% overall (Fronstein, SHADAC) 80-82% completed the March supplement 43.2% in 1998 (Atrostic et al. 1999)	• MKA: Most knowledgeable adult is interviewee when possible; responds for self and all other members of household • If individual moves from household, they are dropped from sample	In person and by telephone, varies over the course of interviews
BRFSS	76.5% nationally	One adult (18+) is randomly selected from each household	Telephone
CTS	65% between 1996-1997 (Lewis et al., 1998)	• Individual adult responds for all household adult residents • In addition, respondent supplies information on one randomly selected child in household	Primarily telephone interviews; additional in person interviews for sample of households without telephone
FHIS	69.2% for RDD sample 42.9% for Medicaid sample 73.4% for BH list sample 51.5% for field sample	MKA: Most knowledgeable adult is interviewee; responds for self and all other members of the family insurance unit	Primarily telephone interviews; additional in person interviews for sample of households without telephone
MEPS-HC	65.2% for Panel 4 in early 2000	One family respondent reports for self and other family members	In person; except that initial contact is by mail and telephone and final interview is by telephone

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Survey (Code)	Response Rate	Respondent Selection	Interview Mode
NHIS	Reported as greater than 90% [National Center for Health Statistics (NCHS) Web site; http://www.cdc.gov/nchs/]	• For family core: All family members are invited to respond for themselves. For children and adults who are not at home, a responsible adult family member may respond • For adult core: One randomly selected adult responds for self (no proxies permitted) • For child core: MKA-- Most knowledgeable adult is interviewee; responds for self and all other members of household	In person
NSAF	Approximately 64% in 1999	MKA: Most knowledgeable adult is interviewee; responds for self and all other members of household	Telephone For those interviewees without telephones, in person interviewers provided respondents with cellular phones, and interviews were conducted via cell phones
SIPP	79.1% in 1998 (Atrostic et al. 1999)	• Interviews are conducted with all individuals aged 15 and older. Proxies are permitted when necessary • If individual moves from household, they are followed to new household, and new housemates are included in sample	In person, with follow-ups conducted over telephone

Potential sources of bias in population-based surveys available for analysis of health coverage in Washington State are summarized as follows for illustration only, showing the approximate relative level of each type of bias. Although BRFSS sampling frame coverage is likely be strong, its sample is not designed to cover the entire family (i.e. it does not include children) and is thus classified as having a high potential under-coverage bias.

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Survey	Frame & Population Coverage	Response Rate	Respondent Selection	Interview Mode	Recall
WSPS	Medium	Medium	Medium	Low	Low
CPS	High	Very Low	Medium	Very Low	High
BRFSS	High	Low	Low	Low	Low
FHIS	Low	Low	Medium	Low	Low
NSAF	Low	Low	Medium	Low	Low

Washington State Planning Grant on Access to Health Insurance

Work In Progress

(Excerpted from draft consultant report on Data for Assessing Access to Health Insurance Coverage in Washington State) *

Survey Content

All of the population surveys reviewed included the demographic information needed for coverage policy analysis. These include age, race, Hispanic ethnicity (some also include information about other ethnic groups), sex, and education. In addition, most of the surveys reviewed include detailed information about relationships among household members. Relationship information is needed to combine household members into families that might be considered eligible for coverage under a specific policy option. For example, most surveys ask about all persons in the household who are related to the respondent, but coverage eligibility may be limited to spouses and the children. This is true of all surveys except the BRFSS, which asks questions only about the respondent and doesn't permit analyses at the family level.

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a.   Content of Population Health Coverage Surveys

	WSPS	CPS		BRFSS	CTS	FHIS	MEPS	NHIS	NSAF	SIPP
Source of Coverage										
Covered by Employer or Union	X(62)	X(74)/X(82)/X(83)		X(5)	X(11)	X(18)		X(30/3)	X(E-1)	X(J6)
Purchased Health Plan	X(62)	X(74)/X(84)		X(5)	X(12)	X(18)		X(30)	X(E-2)	X(J6)
Medicare	X(62)	X(77)/X(84)		X(5)	X(13)	X(13)		X(30)	X(E-3)	X(J1)
Medicare supplemental policies or Medigap					X(33)			X(30)		
Type of Medicare coverage							*X(28-52)	X(30)		
In Medicare HMO							X(28-56)	X(31)		
CHAMPUS	X(62)	X(79)/X(84)		X(5)	X(15)	X(16)		X(30)	X(E-4)	X(J6)
TRICARE	X(62)			X(5)	X(15)			X(30)	X(E-4)	X(J6)
CHAMP-VA	X(62)	X(79)/X(84)		X(5)	X(15)	X(16)		X(30)	X(E-4)	X(J6)
VA/ Other Military Health Insurance	X(62)	X(79)/X(84)		X(5)	X(15)	X(16)		X(30)	X(E-4)	X(J6)
Indian Health Service	X(64)	X(79)/X(84)		X(5)	X(16)			X(30)	X(E-4)	
Medicaid	X(62)	X(78)/X(84)		X(5)	X(14)	X(14)		X(30)	X(E-5)	X(J10)
Medicaid and Medicare						X(3)				
State Specific Program	X(63)	X (80)			X(17)	X(15)		X(30)	X(E-5)	X(J10)
Washington Basic Health Plan	*X(63)*	X(81)*but not on 2000 questionnaire??								
Healthy Options	*X(63)*									
DSHS Medical Assistance Programs	X(62)									
Covered by another source of insurance	X(63)					X(22)			X(E-13)	
Other government health care		X(82)								

Content of Population Health Coverage Surveys (continued)

	WSPS	CPS		BRFSS	CTS	FHIS	MEPS	NHIS	NSAF	SIPP
Extended through COBRA							*X(28-192)			
Covered as a temporary worker	X(21)									
Covered by former employer										X(J6)
Covered by spouse's employer or union										
Covered by someone not living in household	X(63)	X(76)		X(5)	X(13)					X(J7)

NOTE: An X denotes that the item appears on the survey. The number in parentheses represents the page on which the item can be found.

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Content of Population Health Coverage Surveys (continued)

	WSPS	CPS	BRFSS	CTS	FHIS	MEPS	NHIS	NSAF	SIPP
EMPLOYMENT AND FINANCES									
Employment									
Current work status	X(15)	(X41BMS)	X(26)	X(96)	X(48)	X	X(FC47)	X(I1)	X(D31)
Past year work status	X(24)	X(4)			X(55)	X	X(FC48)	X(I13)	X(D1)
Current full time/part time/temporary	X(16)	(X41BMS)		X(97)	X(49)	X		X(I7)	X(D16)
Past year full-time/part-time/temporary	X(24)					X		X(I7)	
Job changes in past year	X					X			
Temporary, part time, or seasonal work in [year]	X(20)	X(4)			X(49)				X(D30)
Number of weeks worked in [reference period]	X(24)	X(5)			X(55-A)	X	X(FC48)		X(D25)
For how many employers did you work in [year]/ how many businesses owned? (If more than one at one time, count as one)	X(16)	X(6)				X			X(D5)
Number hours worked in last week		X(44BMS)			X(49)	X	X(FC47)	X(I7)	
Number hours usually worked per week	X(16)/X(18)	X(6)		X(97)	X(52)	X	X(FC47)	X(I7-17)	X(D16)
Want to work full time at 35 or more hours per week	X(19)	X(43BMS)							
Type of work	X(17)	X(8)				X		X(I3)	X(D15)
Most important/usual work activities or duties	X(17)	X(8)							
member of a union	X(21)					X			X(D17)

Content of Population Health Coverage Surveys (continued)

		WSPS	CPS	BRFSS	CTS	FHIS	MEPS	NHIS	NSAF	SIPP

EMPLOYMENT AND FINANCES

Employer
Info

	WSPS	CPS	BRFSS	CTS	FHIS	MEPS	NHIS	NSAF	SIPP
Type of industry or business	X(17)	X(8)		X(100)	X(49)	X		X(I3)	X(D14-19)
private company	X(17)	(X61BMS)		X(97)	X(49)			X(I3)	X(D14)
government	X(17)	(X61BMS)		X(97)	X			X(I3)	X(D14)
federal gov't		(X61BMS)		X(97)	X(49)				X(D14)
state gov't		(X61BMS)		X(97)	X(49)				X(D14)
local gov't		(X61BMS)		X(97)	X(49)				X(D14)
self-employed	X(17)	(X61BMS)		X(96)	X(49)	X		X(I2)	X(D9)
non-profit	X(17)	(X61BMS)						X(I3)	X(D14)
working in family business	X(17)	(X61BMS)		X(97)				X(I3)	
own or operate a farm or business other than a farm	X(14)			X(97)	X(50)			X(I3)	X(D14)
Total number of persons employed in location where respondent works				X(98)	X(50-A)	X		X(I4)	
Employer has more than one location				X(99)	X(50-A)				X(D18)
Total number of persons who work for employer (in all locations)	X(18)	X(9)		X(99)	X(50-A)	X?			X(D18)

For those people who report some unemployment

	WSPS	CPS	BRFSS	CTS	FHIS	MEPS	NHIS	NSAF	SIPP
Has unemployed person been looking for work	X(22) past 4 weeks	X(4)			X(49) in past 4 weeks			X(I11)	X(D4)
How many weeks been looking for work	X(22)	X(4)							X(D4)
Main reason didn't work in [year/reference period]	X(16)	X(4)				X		X(I2)	X(D2)
Main reason left last job	X(24)	X(57BMS)							
Business/Industry of last job	X(24)								

Content of Population Health Coverage Surveys (continued)

	WSPS	CPS	BRFSS	CTS	FHIS	MEPS	NHIS	NSAF	SIPP

EMPLOYMENT AND FINANCES

Income

	WSPS	CPS	BRFSS	CTS	FHIS	MEPS	NHIS	NSAF	SIPP
combined family or household income	X(41)	X(3)	X(26)	X(105)	X(57)	X	X(FC47)	X(I8/I21)	X(H)
Amount individual earned from all sources		X(65)		X(100)	X(56)	X	X(FC47)	X(I9)	X(H)
Amount individual earned from own business or farm		X(65)			X(56)		X(FC50)		X(H)
Amount earned from this employer during [time frame] (before taxes and other deductions)	X(17)	X(10)/year			X(53)	X		X(I9)	X(H)
Received Social Security or SSI payments during [year]	X(42)	X(20)			X(60)		X(FC50)	X(J2)	X(F2)
Amount of Social Security payments	X(42)	X(20)			X(60)			(XJ13)	X(H)
Received public assistance or Welfare payments	X(49)	X(33)			X(61)		X(FC52)	X(J1)	X(F6)
Amount of Welfare in [time period]	X(49)	X(35)			X(61)			X(J5)	X(G8)
Received Veteran's payments		X(36)					X(FC52)	X(J2)	X(F5)
Amount of Veteran's payments received		X(38)						X(J12)	X(H)
Received food stamps	X(48)				X961)	X	X(FC52)authorized to receive	X(J2)	X(G18)
Value of food stamps received	X(48)				X(61)			X(J8)	X(G24)
Other income by source	X(18)	X[13 -19]			X(58,59,62)		X(FC52)	X(J3)	X(D,F,G)

Assets

	WSPS	CPS	BRFSS	CTS	FHIS	MEPS	NHIS	NSAF	SIPP
Any questions about assets	X(46)	X(54)				X		X(J15)	X(I)
Amount of assets in total	X(46)	X(55)				X		X(J15)	X(I)
Amount of assets by source	X(46)	X(54)				X		X(J15)	X(I)

Content of Population Health Coverage Surveys (continued)

	WSPS	CPS*	BRFSS	CTS	FHIS	MEPS**	NHIS	NSAF	SIPP
DEMOGRAPHICS AND PERSONAL VARIABLES									

Demographics

	WSPS	CPS*	BRFSS	CTS	FHIS	MEPS**	NHIS	NSAF	SIPP
Age	X(5)	X	X(24)	X(6)	X(8)	X	X(HC2)	X(SC3)	X(C9)
Race	X(6)	X	X(24)	X(106)	X(67)	X	X(HC2)	X(O1)	X(C15)
Of Spanish/Hispanic/Latino origin	X(5)	X	X(24)	X(6/106)	X(66)	X	X(HC2)	X(O1)	X(C15)
Gender	X(5)	X	X(28)	X(5)	X(8)	X	X(HC2)	X(SC3)	X(C2)
Education	X(7)	X	X(25)	X(5)	X(66)	X		X(L1)	X(C12)
Currently a student	X(22)	X(M75)		X(5)	X(8)	X			X(L1)
U.S. citizen	X(7)	X			X(66)		X(FC46)	X(O1)	

Family Relationship

	WSPS	CPS*	BRFSS	CTS	FHIS	MEPS**	NHIS	NSAF	SIPP
Total number of people residing in household	X(3)	X	X	X(3)	X	X	X(FC11)	X(SC2)	X(C2)
Number of adults in household	X	X	X(2)	X	X(10)	X	X(FC11)	X(SC3)	X(C2)
Number of children in household	X	X	X(25)	X	X(10)	X	X(FC11)	X(SC3)	X(C2)
Name of all householders	X(4)	X		X(3)	X(7)	X	X(HC2)	X(SC3)	X(C2)
Relationship of householders to all other householders	X(4)	X		X(7)	X(9)	X	X(HC8)		X(C4)
Parent or guardian of anyone in house		X		X(9)	X(11)	X	X(HC8)	X(SC4)	X(C5)
Marital Status	X(6)	X	X(25)	X(8)	X(10)	X	X(HC5)		X(C11)
Married to anyone in the household		X		X(8)	X(10)	X	X(HC5)		X(C5)
To whom married		X		X(8)	X(10)	X	X(HC5)		X(C5)

Telephone

	WSPS	CPS*	BRFSS	CTS	FHIS	MEPS**	NHIS	NSAF	SIPP
Number of telephones in household			X(27)	X(109)				X(M6)	
Alternate phone number listed or not		X(77)			X(69)				
Household been without telephone in past year				X(109)				X(M6)	
Length of time without telephone								X(M6)	

*CPS demographic variables may not appear on the March Supplement although the variables are available from other waves of the survey.

** MEPS-HC survey items with demographics were not available.

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b.   Content of Employer Health Coverage Surveys

	MEPS-IC	EHIS	
	Page	**Section**	**Page**
COMPANY SIZE/# EMPLOYEES			
Company overall/Firm			
# of locations		A	2
# of employees nationwide	5	A	2-3
# of employees in state		A	3
Company at this location/Establishment			
# active employees		A	4
# permanent/temporary employees		A	6-7
# union members	5	A	8
# company retirees 65 or over	5	A	9
INSURANCE COVERAGE			
Does employer provide insurance?	1	A	12-14
Does company make available or contribute to the cost of any health insurance plans for employees or retirees?	1	A	I-40
Years company provided/contributed to health insurance		A	10
Company ever denied coverage?		A	10
Employee Eligibility:			
Waiting period for new employees (length of period)	4	A	10-11
Hours for insurance eligibility?		A	11
Number employees eligible for insurance	5	A	12-13
Full Time/Part Time	5		
Temporary or Seasonal Employee eligibility	5	A	12-13
Retiree eligibility (other than through COBRA)		A	12-13
How Insurance Purchased:			
Is insurance purchased through alliance/associations	2	A	14
Features of cooperative/alliance		A	15
Does company or employees select plans?			
Did company consult agent or broker to evaluate benefits?		A	15
Did broker give information on plans not associated with cooperative/ alliance?		A	15
Premium quotes outside of cooperative/alliance		A	16-17
Plans offered to employees at this location:			
Number of plans offered to employees	Inferred	A	21-23
Plan choice same as last year?		A	24
All plans administered by same company?		A	24
Plan administrator requires only its plans be offered?		A	25
Plan enrollment:			
Month plan year begins	2	A	25
Open enrollment period		A	25-26
Enrollments in all plans		A	26-30

Content of Employer Health Coverage Surveys (continued)

	MEPS-IC	EHIS	
	Page	**Section**	**Page**
Cost:			
Annual cost of coverage plans offered *at this location*	4		
Employer contribution policy for health insurance		A	31
Amount spent for insurance in most recent year		A	32-35
Percent employer contributions to retirees' premiums		A	35
Increase or decrease in cost from last year		A	36
Plan Selection Decisions:			
Who makes decisions		A	36-37
Performance measures		A	37
Evaluation materials to employees		A	38
SPECIFIC PLAN INFORMATION; Asked for each plan		C	1-53
Type of plan			
Name of plan	2	C	15-18
Name of insurance carrier	2	C	15-18
Type of insurance plan	2	C	3-7
Self or fully insured	2	C	14-18
If self-insured plan:			
Self-administered or administered by third party?	2		
Stop loss policy?	2	C	19
Type and amount of stop loss		C	19-21
Number of enrollees covered by stop loss		C	21
Enrollees in plan	3	C	8-13
# enrollees excluding dependents	3	X	
# active employees enrolled	3	C	8
# former employees enrolled through COBRA	3	C	9
# retirees enrolled	3	C	10
# enrollees with single coverage	3	X	
Premiums and Employer/Employee Contributions:			
For self-insured plan:			
COBRA premiums: single and family of four	2	C	32-34
During most recent reporting period, actual paid claims, administrative costs, stop loss costs	2	C	35-36
Total number of enrollments		C	36
Premium equivalent calculated?		C	36-37

Content of Employer Health Coverage Surveys (continued)

	MEPS-IC	EHIS	
	Page	**Section**	**Page**
For fully insured plans and self-insured plans with premium equivalent:			
Premium/premium equivalent for **employee-only** coverage employer contribution;	3	C	38-41
employee contribution for employee only coverage	3		
Premium/premium equivalent for **family** coverage employer contribution	3	C	42-46
employee contribution for family coverage	3		
Is premium/premium equivalent same for retirees 65+	3	C	41
Did premiums differ by:			
age	3	C	40
sex	3	C	40
number of persons (within family coverage)	3	C	42
wage or salary levels	3		
other	3		
Did amount of employee contribution differ by:			
employee categories (e.g., full-time, part-time,retiree)	3		
age		C	40
wage or salary levels		C	40
Plan Administrator		C	22
Insurance plan benefits:			
Require primary care physician **referral** to specialist	2	C	6?
Exclusion for **pre-existing conditions**?	4	C	22-23
Did exclusion for pre-existing conditions happen in [year of survey]	4	C	23
Waiting period for pre-existing conditions	4	C	23
Deductibles			
Total individual and family annual deductible	3	C	24-27
Deductible for physican care (answer this and hospital care if not answered total annual deductible)	3	C	24
Deductible for hospital care	3	C	24/27
Family deductible met if a number of individuals met their individual deductibles	3		

Content of Employer Health Coverage Surveys (continued)

	MEPS-IC	EHIS	
	Page	**Section**	**Page**
Coinsurance/copayments		C	28-31
Enrollee cost for an overnight hospital stay ($ or %)	3	C	30-31
Enrollee cost for an office visit ($ or %)	3	C	28
Annual individual out-of-pocket limit	4	C	31-32
Annual family out-of-pocket limit	4		
Annual maximum plan would pay for individual; lifetime and one year?	3		
Any enrollee receive a direct subsidy or contribution (e.g., from a union or government)?	2		
Premium includes **life insurance**	3		
Premium includes **disability insurance**	3		
Services included in plan:			
100% well-baby care	4		
Adult immunizations	4		
Adult routine physical exams	4		
Alcohol/substance abuse treatment	4		
Child immunizations	4		
Chiropractic care	4		
Home health care	4		
Inpatient hospital stays		C	7
Inpatient mental illness	4		
Nursing home care	4		
Mental health		C	7
Office visits for prenatal care	4		
Orthodontic care	4	C	7
Other non-physician providers	4		
Outpatient mental illness	4		
Outpatient prescriptions	4	C	7
Physician services		C	7
Routine dental care	4	C	7
Routine mammograms	4		
Routine pap smears	4		
Vision care		C	7
Well child-care, 1-4 years	4		
Well-baby care, under 1 year	4		

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Content of Employer Health Coverage Surveys (continued)

	MEPS-IC	EHIS	
	Page	Section	Page
Offer optional coverage at additional premium:	4		
dental	4		
vision	4		
prescription drugs	4		
long-term care	4		
Total amount paid for these services	4		
Contract specifications			
For employers with fewer than 50 employees (in state):			
Guaranteed renewal of contract		C	47
Minimum employer contribution?		C	47
Minimum percent of employees must enroll?		C	47
Employees report prior history		C	48
For self-insured plans:			
Contract directly with physician groups or hospitals		C	48
Carve outs		C	48
How single service and general plans are "packaged":		C	52-53
Plan still offered in subsequent year?	4		
Plan replaced?	4		
If replaced, for replacement plan, what were:	4		
Single enrollment	4		
Family enrollment	4		
Single premium	4		
Family premium	4		
For companies that have pooled purchasing arrangement, is THIS plan:			
Purchased through cooperative/alliance?		C	1
Purchased through a business coalition?		C	1
Purchased through a MEWA or MET?	2	C	2
Sponsored by trade or professional association	2	C	2
Sponsored by a union?	2	C	2

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Content of Employer Health Coverage Surveys (continued)

	MEPS-IC	EHIS	
	Page	Section	Page
ESTABLISHMENT AND EMPLOYEE CHARACTERISTICS			
Length company in business	5	D	1
Industry	5	D	2-6
Ownership type	5		
For profit vs. non-profit	5		
Number of employees on payroll	5	D	7
full-time	5	X	
part-time	5	X	
temporary/seasonal employees	5	X	
Number of full- and part-time employees added to payroll in prior year		D	8
Number of permanent employees removed from payroll in past year		D	8-9
Distribution of hours permanent employees work		D	9
Number of hours/week must work to be full-time	5		
Age distribution for permanent employees		D	10
Number of employees over 50	5		
Percent of permanent female employees	(# of women)	D	11
Number of wage vs salary workers		D	11
Wage distribution for hourly workers	5	D	12
Earnings distribution for salaried workers		D	13-14
Gross amount of payroll		D	15
Number of labor hours included in payroll		D	15
Total sick days during most recent fiscal year		D	16
Fringe benefits offered			
Paid vacation	5		
Paid sick leave	5		
Life insurance	5		
Disability insurance	5		
Retirement/pension plans	5		
MSAs	5		
Flexible spending accounts	5		
Cafeteria plan	5		

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Content of Employer Health Coverage Surveys (continued)

	MEPS-IC	EHIS	
	Page	Section	Page
Eligible/Enrolled by Plan			
Total number of employees eligible	5	C	8
full-time	5		
part-time	5		
temporary/seasonal employees	5		
Total number of employees enrolled	5	C	8
full-time	5		
part-time	5		
temporary/seasonal employees	5		
FIRMS THAT DO NOT OFFER HEALTH INSURANCE			
Alternative company health care expense assistance:			
Payment for insurance under spouse's plan		B	1
Voucher or money to purchase health insurance	6	B	1
used for health insurance/health care only	6		
average per employee value of voucher	6		
Direct payment of medical bills	6	B	1
Prior insurance purchase:			
Ever denied health insurance?		B	2
Health insurance offered within past two years?		B	2
Health insurance offered since 1991	6		
Year last offered insurance	6		
If no: Company looked into purchasing insurance?		B	2
Premium quote within past two years?		B	3
Type of plan/s for which received quote		B	4
Lowest quote per employee		B	4-8

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c.   Availability of Data on Health Status, Utilization and Access to Care

	WSPS	CPS	BRFSS	CTS	FHIS	MEPS	NHIS	NSAF	SIPP
Dimensions of Health Status									
Self-Assessed general health	X	X	X	X	X	X	X	X	X
Activity limitation/ Disability	X		X	X	X	X	X	X	X
Other			X	X		X	X	X	
Dimensions of Utilization									
Doctor Visits			X	X	X	X	X	X	X
ER Visits			X	X	X	X	X	X	
Inpatient				X	X	X	X	X	X
Preventive services			X	X	X	X		X	X
Other			X	X	X	X	X	X	X
Dimensions of Access to Care									
Usual Source of Care –Type of Place			X	X	X	X	X	X	
Usual Source of Care – Particular Physician			X	X		X			
Perceived barriers to Care/Unmet Need			X	X	X	X	X	X	X
Satisfaction with Care			X	X	X	X		X	

d.   Availability of Economic Information

	WSPS	CPS	BRFSS	CTS	FHIS	MEPS	NHIS	NSAF	SIPP
Employment									
Current Work Status	X	X	X	X	X	X	X	X	X
Past Year Work Status	X	X			X	X	X	X	X
Current full time/part time/temporary	X	X		X	X	X		X	X
Number hours usually worked per week	X	X		X	X	X	X	X	X
Type of industry or business	X	X		X	X	X		X	X
For those people who report some unemployment									
Has unemployed person been looking for work	X	X			X			X	X
Income									
Combined family or household income	X	X	X	X	X	X	X	X	X
Received Social Security or SSI payments	X	X			X		X	X	X
Received public assistance or Welfar Payments	X	X			X		X	X	X
Received Veteran's Paymnets		X					X	X	X
Assets									
Any questions about assets	X	X				X		X	X

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Washington State Planning Grant on Access to Health Insurance

Reasons for Differences in Survey Estimates of Washington's Uninsured Population

(Excerpted from draft consultant report on Data for Assessing Access to Health Insurance Coverage in Washington State) *

Tables below show estimates of sources of health insurance for non-elderly adults (older than 18 and younger than 65 years of age) and children (18 or under) taken only from surveys that provide recent numbers. The estimates generated by the WSPS and the CPS are for the year 2000, while the estimates from the SIPP and the NSAF are for 1999, the most recent year for which data were available.

Source of Health Insurance for All Non-Elderly Adults in Washington State

	WSPS 2000		CPS 2000		SIPP 1999		NSAF 1999	
	%	Std Err	%	Std Err	%	Std Err	%	Std Err
Employment	71.4	0.8	70.2	1.8	74.8	2.0	72.6	1.1
Medicaid/Basic Health Plan	11.5	0.6	7.0	0.9	7.1	0.8	6.7	0.5
Direct Purchase and Other	6.9	0.4	3.8	0.7	6.1	1.0	7.8	0.6
Uninsured	10.2	0.5	19.0	1.5	12.0	1.5	12.9	0.8
No. of cases	10741		1047		906		Not available	

Source of Health Insurance for Children Aged 18 and Younger

	WSPS 2000		CPS 2000		SIPP 1999	
	%	Std Err	%	Std Err	%	Std Err
Employment	68.9	1.3	66.0	3.5	67.6	3.7
Medicaid/Basic Health Plan	18.8	1.0	15.3	2.6	20.6	3.2
Direct Purchase and Other	5.2	0.6	4.9	1.5	4.1	1.3
Uninsured	7.1	0.7	13.8	2.5	7.8	2.0
No. of cases	5343		458		446	

PRECISION OF SURVEY ESTIMATES:

Sampling Considerations: The precision of estimates stems from the design and size of a survey sample. Appendix III, Section 8 includes a basic description of sampling design and size for each of

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the population surveys in this analysis. Each survey relies on one of two sampling strategies, area probability sampling (APS) or random digit dialing (RDD).

The large-scale, federally sponsored surveys (CPS, MEPS, and NHIS) rely on APS. In these surveys, interviews are generally conducted in the respondents' homes, and efficiency therefore demands that the respondents be clustered geographically. Often APS sampling takes place in stages, where large areas are selected first, then smaller areas or dwelling units, and finally individual family units or households are selected, with each stage using a systematic randomization process. This method has many advantages; it assures excellent population coverage, as it does not depend on the quality of existing lists or the presence of a telephone, and in-person interviewing generally yields very high response rates and high-quality responses. However, members of the sample within a cluster are generally more similar to one another than would be the case in non-clustered samples. While bias from such clustering can be eliminated through standard survey weighting strategies, clustering reduces survey precision for a given sample size. Moreover, sampling strategies in national surveys are generally designed to represent large areas (e.g., regions of the nation) and not individual states. Thus, even though these surveys may have large samples in a given state, the design is not optimized to represent states per se, potentially leading to bias in state-level estimates.

Random digit dialing is the sampling methodology of choice for most of the other population health surveys reviewed. Under RDD, telephone numbers are selected through systematic random sampling. This generates a geographically dispersed sample, which maximizes precision for a given sample size. However, some households do not have telephones, and response rates are generally lower when respondents are approached by telephone.

Some surveys, such as the FHIS, supplement RDD with samples drawn from lists, such as Medicaid or Basic Health enrollment files. This is an efficient way of over-sampling comparatively rare sub-populations. To over-sample sub-populations for which lists are not available, brief screener interviews are generally conducted and eligible households are selected for full interviewing. For a given sample size, over-sampling can reduce precision somewhat, but it enhances analysts' ability to study rare subgroups. Over-sampling of high-variability groups relative to low-variability groups can also increase precision.

Finally, whether APS or RDD, sample stratification is often used to ensure broad representation across geographic regions or other strata. As long as members of each stratum have the same probability of selection (i.e., there is no over-sampling), stratification does not reduce precision even as it assures that a sample is representative.

These sampling considerations have significant implications for analysis of population data for Washington. Although the national surveys have larger sample sizes overall, the WSPS has the largest Washington-specific sample, with approximately 7,000 respondents. WSPS also uses geographic stratification to assure representation of regions of the state. The CPS, on the other hand, has more than 50,000 households included annually, but it has fewer than 1,000 Washington respondents, and because CPS uses an area-probability sample, these respondents are concentrated in two counties (Office of Financial Management Forecasting Division, 2001).

Sub-state Estimates. Policymakers want to know not only the number and characteristics of uninsured in Washington as a whole, but also how coverage is distributed across the state. Sub-state estimates can, for instance, help policymakers target areas that may need more intervention to reduce uninsurance or to expand resources for safety net providers who serve the uninsured. The same

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features of survey design that determine precision also determine the degree and type of sub-state estimates that a survey can produce.

The following table describes the geographic areas for which estimates can be generated among the population surveys analyzed in this paper. In general, the smaller the geographic unit available, the more informative a picture of how uninsurance varies throughout the state can be drawn. Because many of these surveys are national in scope, not all can address the distribution of the uninsured across the state of Washington. The BRFSS, CPS, FHIS, NSAF, and WSPS all support state-level estimates. The BRFSS and WSPS are the only surveys from which sub-state estimates can be made for the entire states. It is likely that the FHIS and NSAF can also support such estimates, but special arrangements would have to be made with the sponsors of these surveys. Other surveys, namely the CPS and CTS, can make sub-state estimates but these are not exhaustive of all areas, and, in the case of CPS, may have quite limited precision.

Population Survey Support of Local Area Estimates

Survey	Geographic Areas			
	National	Groups of States	Washington State	Sub-State Geographic Areas
WSPS	No	No	Yes	King, Clark, and Spokane Counties, and eight regions.
CPS	Yes	U.S. Census Divisions and Regions	Yes[1]	Large Metropolitan Statistical Areas (MSAs), counties and cities[2]
BRFSS	Yes	Yes	Yes	Regions
CTS	Yes	No	No	Seattle and 11 non-WA MSAs
FHIS	No	10 States	Yes	Multi-county areas by special arrangement[3]
MEPS-HC	Yes	U.S. Census Divisions and Regions	No	No
NHIS	Yes	U.S. Census Divisions and Regions	May be possible by special arrangement	No
NSAF	Yes	13 States	No	Multi-county areas by special arrangement[3]
SIPP	Yes	U.S. Census Divisions and Regions	Limited estimation possible[2]	No

[1] The Census Bureau recommends that state estimates be used with caution, as standard errors may be large. The Census Bureau published state estimates on a three-year average from the March CPS to create more stable estimates for making state-to-state comparisons.

[2] Estimates for these areas are possible, but may be unreliable due to large standard errors and sample design considerations. Estimates of common outcomes such as the proportion of persons with employer health insurance are more likely to be reliable than estimates of rare events (such as persons losing coverage after loss of a job).

[3] In principle, the sampling designs and sample sizes of these surveys permit estimation for multi-county sub-state areas. Sub-state identifiers are not available on public use data sets, but these might be available through special arrangement with survey sponsors.

SURVEY BIAS:

Sample Frames and Population Under-Coverage. Survey sampling starts with a sampling frame. For RDD, the frame consists of all telephone numbers; for multi-stage APS, the frame consists of all areas, dwelling units within areas, and families within the dwelling units. List samples provide another form of sampling frame. In each case, some members of the target population are missed. In RDD samples, families without phones are missed; in standard APS, homeless persons can be missed; and list samples can include errors or out-of-date information (Lewis et al., 1998). According to the Census Bureau, sample frame under-coverage for the CPS and SIPP is approximately 7 percent, and this varies with sex, age, and race (Bennefield, 1995, as cited in Lewis, et al., 1998). Depending on who is missed, this could either inflate or deflate the estimates of the uninsured or other parameters of interest.

The CPS sample is designed to represent the nation and multi-state regions, and not individual states. Since only a few primary sampling units (PSUs) are selected for the CPS in any given state, frame under-coverage is likely to be a significantly larger problem at the state than the regional or national level. The Census Bureau recommends pooling data for several years to increase the robustness of state-level estimates, but since the number and location of PSUs changes little from year-to-year, pooling is not likely to reduce frame under-coverage bias at the state level. Sample frame under-coverage is a problem that applies to all of the surveys, although few survey sponsors provide estimates of the extent of under-coverage.

Since state-specific health coverage and access surveys are predominantly administered by telephone, it is especially important to understand the potential bias of this method. The percentage of households without telephones has decreased dramatically in the Unites States in the past 25 years, from nearly 20 percent of all households in 1963 to 6.2 percent in 1994 (Keeter, 1995). However, for low-income households, the percentage without telephones is substantially higher (e.g., 17 percent on the 1994 National Health Interview Survey), and the same is true of other major population sub-groups (e.g., on the 1994 NHIS, 10 percent of Black and Hispanic households were without telephones; Anderson, Nelson, & Wilson, 1998). Households without telephones are also less educated, are more likely to be one-person households or very large households, have lived at their current residence for shorter periods (Keeter, 1995), and are more likely to be younger, live in rural-non-farm areas, and be single, divorced, or separated (Freeman, Kiecolt, Nicholls, & Shanks, 1982). Since insurance coverage, health status, health-related behavior, knowledge, and attitudes may differ for these sub-groups, it is important to take steps to reduce this type of coverage bias.

- Three different methods have been suggested as ways to correct for non-telephone coverage bias. The first method is that employed by large national surveys such as the CTS, the FHIS, and the NSAF, where both a telephone sample and an in-person non-telephone sample are included. Although this is the most effective way to reduce telephone coverage bias, it is quite costly and many state and local surveys may not have adequate funding for large in-person samples. For example, in the 1997 NSAF, even when sampling from neighborhoods identified by the Census as low telephone service areas, approximately 22 households were contacted for every one non-telephone household located (Judkins, Shapiro, Brick, Flores-Cervantes, Ferraro, Strickler, & Waksberg, 1999). In-person surveys are at least twice as costly as telephone surveys (Groves, 1989), and there is some evidence that the difference is even greater (McAuliffe, Geller, et al., 1998).

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- The second method for reducing non-telephone coverage bias is to use existing data from large surveys that include non-telephone respondents to develop a weighting scheme (see, for example, Anderson, Nelson, & Wilson, 1998; Freeman, Kiecolt, Nicholls, & Shanks, 1982). Weights comparing the telephone data to the non-telephone data on key demographic variables and other variables of interest (e.g., health insurance coverage, health status) can be derived from these surveys and applied to independent survey data.

- The third method for reducing non-telephone coverage bias is to include a question(s) on the survey that assesses transient telephone coverage (e.g., "At any time during the past twelve months has your household not had a telephone?"). The data from the transient telephone sub-group, which comprises about half of the total non-telephone population (Keeter, 1995), could be used to supplement the standard weighting procedure or to directly derive non-telephone estimates for variables of interest. It has been demonstrated that households with transient telephone coverage are much more similar to continuous non-telephone households than to continuous telephone households on both demographic variables and other variables such as health status and health insurance coverage (Keeter, 1995). This technique has been recently recommended as a cost-effective way to reduce the bias from telephone non-coverage (McAuliffe, Geller, et al., 1998).

A number of surveys reviewed here utilize both telephone and in-person interviewing. For example, the CTS, the FHIS, and the NSAF all include field samples of households without telephones, but rely primarily on telephone interviews for the vast majority of respondents. The two panel surveys reviewed here (MEPS-HC and the SIPP) use a combination of in-person and telephone interviewing across the different waves of data collection, allowing for the convenience of telephone interviewing while maintaining the rigor of in-person interviews. The remainder of the surveys utilize face-to-face interviewing exclusively, with the exception of the WSPS. The WSPS is a telephone-only survey that does not include any in-person interview sample. Although post-stratification weighting adjustments were made to correct for this, the WSPS is the most likely survey reviewed here to suffer from under-coverage of the non-telephone population.

Response rates.   The survey response rate is a commonly reported survey statistic, and non-response can be a significant source of bias in survey estimates. Surveys measure response rates in different ways, making cross-survey comparisons difficult (Atrostic, Bates, Burt, Silberstein, & Winters, 1999), but comparisons are an important way to judge the potential for bias. Although methods to maximize response rates will vary by the nature of specific surveys, response rates are a reflection of the following:

- The salience of a survey's topic (e.g., health survey response rates were generally higher during the Clinton health reform debate)

- A survey's sponsorship (government-sponsored surveys generally have higher response rates than private surveys)

- Survey mode (in-person surveys generally attain higher response rates, followed by telephone and mail response rates)

- Whether interviews are conducted at a single point in time or repeated multiple times (the latter leading to lower total response)

- Follow-up methods (more is generally better)

There is no established standard of an adequate response rate, but most population surveys of the type considered here report response rates between about 60 percent and 90 percent (see Table 6). Although higher response rates are better, techniques exist to minimize bias from sub-optimal response rates (Cox and Cohen, 1985). Specifically, statistical strategies can be used to up-weight respondents who are similar (e.g., demographically or geographically) to non-respondents. These techniques can assure that basic demographic distributions are equivalent to Census or other "gold standard" estimates. The large federal surveys in our analysis report the higher response rates (e.g., over 90 percent for the CPS and NHIS). Because of the pervasiveness of telemarketing and the proliferation of telephone lines not used for voice communication (e.g., modem lines), calculating response rates for RDD samples and achieving high rates in such studies has become increasingly difficult. The response rate reported by the WSPS is lower than the other surveys in our analysis: 59 percent for the general sample in 1998 and 43 percent for the same sample in 2000. The rates for the expanded sample are even lower: 43 percent in 1998 and 29 percent in 2000. Non-response to individual survey items can also lead to bias. Again, techniques are available for minimizing such biases.

Respondent selection. Allowing respondents to answer questions regarding someone other than him or herself (i.e., proxy responses) poses the problem that the respondent may not be able to answer questions accurately. For example, one adult may not know the true health insurance status of another adult in the family, although they may believe that they do and subsequently respond incorrectly. However, relying on exclusive self-response can exacerbate under-coverage of the population, as it is harder to access and interview each household member, thus reducing the number of people for whom data is collected.

Among those surveys that do permit proxy response, the majority request to speak with the "most knowledgeable adult" (MKA). Speaking with the MKA should improve accuracy, although there is the possibility that even the most knowledgeable person does not know everything about all household members and introduces some error into the data. An example of a survey that does not have the MKA as the respondent is the BRFSS, which does not permit proxy response. For the BRFSS, the respondent is simply a randomly selected adult who is asked to report on him/herself exclusively. Large federal surveys, such as the MEPS, supplement MKA interviews with self-administered questionnaires for selected questions (e.g., health-related behaviors and health status). Although this technique can reduce proxy respondent bias, it is effectively a survey-within-a-survey and can add significant costs.

Interview mode. Fowler (1993) describes many of the pros and cons of conducting interviews in person versus over the telephone. In-person interviewing can encourage people to take the survey more seriously and to consider their responses more carefully, resulting in greater accuracy. Visual aids used for in-person interviewing can help respondents follow complex instructions or sequences more easily, and it may be easier for the respondent to maintain their concentration and stay focused on the interview. In addition, in-person interviews can increase the number of people willing to respond. The primary benefits of telephone interviewing are financial, as they are significantly less expensive to conduct than in-person interviews. Although telephone surveys may be better for reaching certain sub-groups of respondents, particularly those in urban areas (Fowler, 1993), the main drawback of telephone surveys is that households without telephones will not be included in the sample.

Recall bias. Respondents may incorrectly reply to survey questions for a variety of reasons, but perhaps the most common reason is that they do not correctly remember the correct response.

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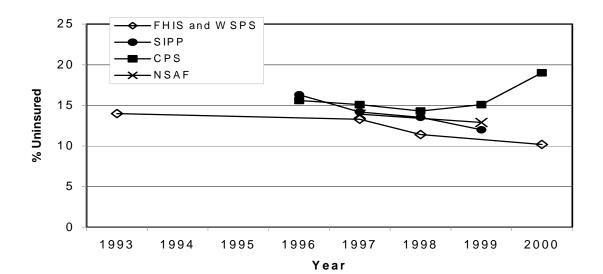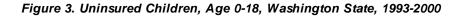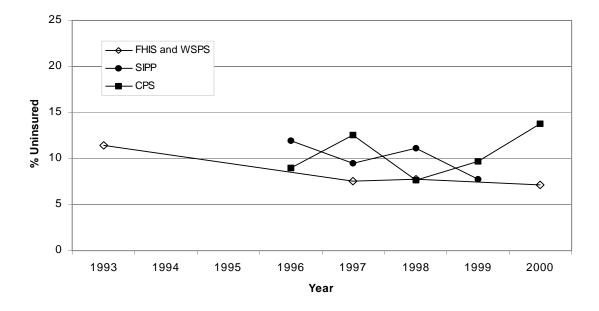
Incorrect reporting for this reason is considered recall bias. Recent events are more easily remembered than more distant ones (Groves, 1989). The CPS asks people to report their health insurance status for the previous year, rather than their current insurance status (like the WSPS) or their status for a shorter period of time (e.g., the SIPP asks about the preceding four months). Event memory decreases significantly over a one-year period, particularly for non-salient events, a category in which health insurance status falls for many people. Because of its long reference period, the CPS is particularly vulnerable to recall bias. It is easy to imagine a respondent not recalling a brief spell of uninsurance that occurred very early in the previous year, and subsequently being incorrectly classified by the CPS. In addition to leading to recall bias, the CPS's question wording increases the likelihood of misinterpretation of the item, an issue that is discussed further later in the report.

Variation in reporting enrollment in state-sponsored coverage: Reporting of enrollment in state-sponsored coverage appears to be of particular concern, and the way surveys deal with this problem can lead to variations in estimates. Lewis and colleagues (1998) review a number of reasons why state-sponsored coverage may be under-reported:

- Stigma is associated with public assistance programs, thus discouraging people from reporting it.

- Respondents may not realize they are enrolled in Medicaid at a given point in time.

- Individuals enrolled in Medicaid managed care plans may incorrectly identify themselves as being enrolled in private managed care, further reducing the number of people identifying as being in Medicaid.

- State Medicaid programs often go under different names, such as Hoosier HealthWise and Husky Health Plan. Respondents may not think of their health plan as being a Medicaid plan if it has a different name, and only some surveys include state-specific program names in their questionnaires.

- Failing to ask about specific programs by name in addition to Medicaid likely leads to under-reporting of enrollment in those programs. The WSPS has survey items covering all the state's public health insurance programs. Although the CPS has a long list of state-specific programs, Washington's Basic Health was not included in 2000, increasing the likelihood of reporting errors.

Medicaid under-reporting can be corrected, to some extent, through statistical imputation methods. Imputation is the process by which respondent reports of coverage are changed based on other respondent characteristics. For example, even if it is not reported, the CPS uses imputation to assign Medicaid coverage to children under 21 whose families have Medicaid and to people who receive welfare who live in states that require them to have Medicaid coverage (Lewis et al., 1998). In addition, the CPS also imputes insurance status for those who reported that they did not know what coverage they (or a household member) had. The Urban Institute adjusts CPS data for under-reporting of Medicaid in the CPS by using a micro-simulation model to test for Medicaid eligibility among respondents who did not report Medicaid coverage and imputing coverage to some of the eligibles (Nelson & Mills, 2001). This resulted in a decrease in the estimate of uninsured children by 30 percent using the March 1995 CPS. However, this may overcompensate for the CPS's overly conservative estimate. Thus, the issue of imputation has implications not only for the estimates of

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the specific types of insurance Washingtonians have, but also estimates of whether they have health insurance at all.

Fluctuation of estimates (CPS) from survey to survey: The CPS is thought to over-estimate uninsurance compared to state population surveys (State Health Access Data Assistance Center, 2001a; State Health Access Data Assistance Center, 2001b). Preliminary analyses of Washington uninsurance rates demonstrate the same pattern when the WSPS is compared to the CPS and the SIPP. For 2000, the CPS estimate of the number of uninsured in Washington is almost twice that of the WSPS. The SIPP, which is similar to the CPS in terms of its sampling strategies, produces an estimate of the uninsured in Washington that is much more aligned with the WSPS than the CPS. Figures 2 and 3 (figure 1 not included) illustrate that the discrepancies among the surveys are not unique to 1999/2000 data. Similar patterns can be found over time: the CPS tends to be discrepant from the other surveys, particularly in its estimates of uninsured children. In addition, the CPS shows more variability than the other surveys, as its estimates fluctuate from year to year more than those of the other surveys do. Again, this is most true among its estimates of uninsured children. The variability in the CPS over time and the historical lack of concordance with the other surveys are reasons to be cautious of the CPS estimates of the uninsured at the state level.

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Figure 2. Uninsured Non-Elderly Adults, Age 19 to 64, Washington State, 1993-2000

Figure 3. Uninsured Children, Age 0-18, Washington State, 1993-2000

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Verification questions. Verification questions check that a person who has responded that they are not covered by any form of insurance mentioned in the interview is in fact uninsured. Verification questions are also asked for other members of a household when proxy response is permitted. This question is generally asked after the respondent has stated that he or she is not covered by any of the forms of coverage mentioned. A typical verification question is "I have recorded that you were not covered by a health plan at any time in 1999. Is that correct?" (CPS, 2000). Because the question is designed to catch people who would otherwise be counted as uninsured, the anticipated effect of including this question is a lower uninsurance estimate. Verification questions may, in fact, correctly identify persons who are covered but were reported as uninsured, but these questions may also pressure some respondents to give a socially desirable response that a person is covered, even if he or she is not.

The CPS did not have a verification question and has historically generated higher estimates of uninsurance compared to other national surveys. In March 2000, a verification question was included in the CPS in order to test its effects on uninsurance estimates. As expected, including this question resulted in a significant decrease in the number of uninsured estimated by the CPS. At a the national level, eight percent of those who would otherwise have been classified as uninsured reported that they did in fact have health insurance coverage. This lowered the CPS estimate of the uninsured by 3.3 million people (Nelson & Mills, 2001).

Similarly, the CTS recently added a verification question, and it resulted in a decrease of approximately 7 percent in the number of uninsured, reducing the estimate from 35.1 million to 32.8 million nationally (Nelson et al., 2001).

The surveys reviewed vary on whether or not they include a verification question. Neither WSPS 2000 nor the SIPP have a verification question, and they subsequently calculate the uninsured as a residual. The MEPS-HC, the NHIS, and the NSAF do have verification questions (Office of the Assistant Secretary of Planning and Evaluation, 2001) and WSPS has included a verification question in the 2002 survey. Even with the verification question, the CPS's estimate is significantly higher than those of the WSPS or the SIPP.

Reference periods. The wording of insurance questions can also make a significant difference in the estimates of uninsurance that can generated by each survey.

	WSPS	CPS	BRFSS	CTS	FHIS	MEPS	NHIS	NSAF	SIPP
Uninsured point in time	X	X[1]	X	X	X	X	X	X	X
Uninsured entire year			X	X	X	X	X	X	X
Ever uninsured prior year		X	X	X	X	X	X	X	X
How long uninsured			X	X	X	X	X	X	X
How long covered			X						X

[1] The CPS has experimented with adding questions about current coverage, but the questions measuring coverage in the prior year remain the primary coverage concept in this survey.

Point-in-time uninsured estimates can be derived from all of the surveys. However, until 2000, the CPS only supported annual (prior year) uninsured estimates. In the main battery of CPS questions, respondents are asked whether members of their household had any of each source of coverage at

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any time in the previous year, and those who respond that they have no coverage should be interpreted as reporting that they were uninsured for the entire year. The validity of this method is controversial. Many analysts believe that many respondents report current insurance status rather than status during the preceding year, which could in part account for the CPS's higher estimates of uninsurance (Lewis et al., 1998). The WSPS asks only about coverage at a point in time. The remaining surveys support both current and historical uninsured estimates.

Cognitive factors. A number of cognitive factors can affect the respondents' accuracy on the insurance questions.

- The length of recall periods used by those surveys that are not asking about current status can affect accuracy. Cognitive testing of surveys indicate that accuracy significantly declines with longer reference periods (Groves, 1989). The CPS asks respondents to recall insurance status for the previous year, and the SIPP asks for the previous four months. The MEPS-HC's reference point changes depending on when the respondent was interviewed (January 1 of that year is a constant reference point). The lack of accuracy related to longer recall periods are one important reason that point-in-time estimates may be preferable to others.

- The level of detail included in the questionnaires can affect the accuracy of responses. For example, the SIPP asks extremely detailed health insurance questions, such as asking to see respondents' Medicaid and Medicare cards. In addition to improving accuracy by objectively checking respondents' answers, this may prime other health relevant information, resulting in improved accuracy on other items that are not directly related to Medicaid or Medicare, such as utilization. Neither the WSPS nor the CPS includes particularly detailed health insurance questions, nor do they seek objective verification of interviewees' responses.

- In much the same way that the level of detail of the questions can affect accuracy, so can the focus of the survey. A focus on health may prime health insurance relevant information and result in greater accuracy of responses. Neither the CPS nor the WSPS focus specifically on health, and the health insurance questions are toward the end of the surveys, which may decrease attention and resultant accuracy.

Non-response to insurance questions. Although item non-response can be an important source of bias for many measures, it is particularly important for coverage estimates. There are multiple ways of dealing with people who do not respond to any of the health insurance questions. The most common method among the surveys reviewed was to consider these respondents uninsured, as occurred with the WSPS, the MEPS-HC, the CTS, and the NHIS. However, this is likely to artificially inflate estimates of uninsurance.

Definition of uninsurance. Although many of the issues noted have unpredictable effects on uninsurance estimates, the way that uninsurance is defined usually has predictable effects on uninsurance estimates (Lewis et al., 1998). For example, the CTS counts people who report using the Indian Health Service as having health insurance, while none of the other surveys do (Office of the Assistant Secretary of Planning and Evaluation, 2001). Similarly, the MEPS-HC groups all public insurance together, something the other surveys do not do. This variability renders cross-survey comparisons extremely difficult. Fortunately, both the WSPS and the CPS provide public use data sets that allow researchers to modify some of the definitions and render the surveys more

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comparable. Variability in the way age, income, ethnicity, and insurance types are measured are potentially important differences across surveys, but are usually easily corrected.

Some differences in the way the data are reported cannot be corrected (e.g., state health insurance programs and Medicaid are reported together for the CPS because they did not ask about Washington's Basic Health separately in 2000). However, it is possible to adjust for some differences post-hoc, by standardizing the groups for which the estimates are made. For example, it is possible to standardize the definition of non-elderly adult; (for Washington's grant analysis work the definition is over 18 and under 65 years of age). More importantly, it is possible to standardize the categorization of insurance types wherever allowable. (For Washington's grant analysis work a hierarchy was used to generate estimates, so that if a respondent reported that he or she was receiving both Medicaid and employment-sponsored insurance, the respondent was counted as having only employer-sponsored insurance. The hierarchy reflects how coverage works in practice, with public sources paying only after other coverage is exhausted.

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Washington State Planning Grant on Access to Health Insurance

Methodology for Developing Key Data Constructs Not in WSPS
(Excerpted from draft Consultant Report on Profiles of Washington's Uninsured) *

The profile of the uninsured and the analyses of coverage gaps and barriers to coverage are based primarily on data collected in the 2000 Washington State Population Survey (hereafter 2000 WSPS). The purpose of this appendix is to describe methods used to develop key constructs for our analysis that are not directly measured in the survey.

Matching to Other Surveys

We used three other surveys to impute important characteristics for our analyses that were not measured in the 2000 WSPS. These other surveys include: the 1998 Washington State Population Survey (for a measure of any period of uninsurance during the year); the 1997 RWJF Washington Family Health Insurance Survey (for a measure of the length of the uninsurance spell in progress); and the 1997 RWJF Employer Health Insurance Survey (for detailed information about the offer of employer health insurance). The imputation involves matching observations in the 2000 WSPS and the host survey based on characteristics common to both.

The longitudinal insurance measures were imputed using a probit regression model that was estimated from the host data set to explain the characteristic in question (having any period of uninsurance during the year or having a spell in progress of 1 year or more). Explanatory variables in these regressions included: age, health status, poverty level, race/ethnicity, education, availability of employer-offered insurance, whether the primary earner was self-employed, and number of earners in the family. For each observation in the 2000 WSPS, we predicted the value of the characteristic as:

$$y = 1 \text{ if } f(Xb + m) > 0.5 \text{ , and } y = 0 \text{ otherwise.}$$

The y values we impute take on the value 1 if the person was uninsured at any time in the last year and 1 if the current uninsurance spell has been in progress for a year or more. The X are the explanatory characteristics defined above, the b are the coefficients from the probit model, the m is drawn from a normal distribution with mean equal to 0 and variance equal to 1, and f is the standard cumulative normal distribution. This imputation is analogous to reweighting the host data to match the distribution of explanatory characteristics in the 2000 WSPS survey.

Because we wanted to study a number of characteristics about employer-sponsored insurance, we synthetically matched each worker in the 2000 WSPS to an employer in the 1997 RWJF Employer Health Insurance Survey. That is, rather than imputing characteristics of employer-sponsored insurance one by one, we attached all of the characteristics of a single employer to each worker. This process preserves the joint distribution of these characteristics. We assigned workers to employers based on industry, size of the business, the wage mix of the workforce and the business and the worker's wage, and information about whether the household survey respondent worked for an employer that offers insurance. Employers and workers were assigned to one of 20 industry/size groups. The industry groups were agriculture/forestry/fishing; construction/mining/manufacturing; trade; communications/transportation/utilities/ and finance/insurance/real estate; professional services; other services; local government; state government; and federal government. All industries except agriculture/forestry/fishing and the government groups were categorized by number of

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workers in the business: fewer than 10, 10-25, 26-50, and 51 or more. Each of these industry size groups was classified by the wages of the workers in the business: low-wage businesses—those with 2/3 or more workers earning less than $10 per hour –and other businesses. A low-wage worker in the 2000 WSPS (i.e. one earning less than $10 per hour) was probabilistically assigned to an industry/size/type of business on the basis of the reported industry and size of his/her employer and the proportion of low-wage workers in this industry size group that are employed by low-wage businesses. For example, if 80 percent of all low-wage workers in the other service industry who work for business with fewer than 10 workers are in a low-wage business of this type, then the worker is assigned to a small, other service, low-wage business with probability of .8 and to a small, other service, higher-wage business with probability .2. Within the assigned type of businesses, random selections were made.

For some workers, we have information about whether the employer offers insurance, and we used this to create a subset of the sample including businesses to which a match might be made. For example, if there is a single worker in the family, we know that coverage is available if the worker has employer coverage or reports that it is available. In such case, we would assign the worker only to businesses that offer employer-sponsored insurance (and we recalculate the probability of working for a low-wage or high-wage business to account for this subset). If there are two-workers in the family, and the workers are covered by employer coverage or report that employer coverage is available, we know that at least one of the workers is employed by a business that offers coverage. We assume that a full-time worker at the largest of the businesses is offered coverage in this case and assign that worker to a business that offers employer-sponsored coverage. The other worker in the family can be assigned to a business that offers coverage or to one that does not. If the worker or workers in the family are full time workers and report that coverage is not available, we assume that the employer does not offer coverage and limit our assignment to these businesses. However, if the worker who does not have coverage available is a part-time worker, the worker can be assigned to an employer that offers coverage or one that does not.

The analysis of workers and their assigned employers can thought of as reweighting the 1997 RWJF Employer Health Insurance Survey using employee weights derived from the 2000 WSPS survey. The distribution of workers according to characteristics of the business to which they linked is shown in Table 1. We compared the distribution of employees by industry, low-wage vs. other business, size of business, and whether insurance is offered by the business using these new weights and the employee weights from the 1997 RWJF Employer Health Insurance Survey. The results were not markedly different.

Eligibility for Public Programs

To analyze access to insurance for the uninsured, we identified uninsured persons who are eligible for public programs based on information in the 2000 WSPS. This coding represents an approximation and an abstraction from the complexity of eligibility rules; our coding is constrained by measures available in the survey. The rules we used for determining eligibility are as follows:

For children age 18 or younger:

Medicaid: The child is eligible if he/she is a citizen or non-citizen resident in the U.S. 5 years or more, and adjusted family income is less than or equal to 200 percent of the federal poverty level. Adjusted family income is total family income less $90 per month per worker in the family less the costs of paid child care per month related to working expenses less child support payments (as

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reported in the survey). We approximate allowed deductions for child care costs by determining from the survey (1) whether the family reports making child care cost payments and (2) if there is a working adult. If yes, we deduct an amount of childcare costs based on the age and county-specific child care cost standards from the Pearce Self-Sufficiency Standard (Pearce & Brooks, 2001).

Children's Health Program: The child is eligible if a non-citizen and resident less than five years and adjusted family income is less than or equal to 100 percent of the federal poverty level. Adjusted income is determined as described for Medicaid.

CHIP: The child is eligible if he/she is a citizen or non-citizen resident in the U.S. 5 years of more and adjusted family income is less than or equal to 250 percent of poverty. Although CHIP is not an entitlement, our estimates are that current program funding would be sufficient to cover all uninsured children not otherwise eligible for a public program. Thus, our estimates of eligibility do not take into account capacity limits.

For adults:

Medicaid: The adult is eligible if there are children in the family and the adult is related to the child, the person is a citizen or non-citizen who has been a resident of the U.S. for 5 years or more, and adjusted family income is less than or equal to 45 percent of the federal poverty level. Adjusted family income is total family income less 50 percent of earned income less the costs of paid childcare per month related to working expenses less child support payments.

State Family Assistance program: The adult is eligible if there are children in the family and the adult is related to the child, the person is a non-citizen who has been a resident of the U.S. for fewer than 5 years, and adjusted family income is less than or equal to 45 percent of the federal poverty level. Adjusted family income is as described for Medicaid adults.

SSI related programs/GAU: The person is eligible if disabled, a citizen or non-citizen who has been a resident of the U.S. for 5 years or more, has own *earned* monthly income of less than $740 per month and own *unearned* monthly income of less than $591 per month in area 1 or $570 per month in area 2. The incomes are as measured in the survey. We have operationalized disabled as reporting having a long lasting condition such as blindness, deafness, or severe vision or hearing impairment or reporting having a condition that prevents the individual from working for pay.

Medicaid buy-in: The person is eligible if disabled, a citizen or non-citizen who has been a resident of the U.S. for 5 years or, is working, has family income of less than 450 percent of poverty , and previously received SSI payments. Disability is operationalized as described above. As a proxy for previously receiving SSI payments we use the indicator that the individual received TANF, GA, or SSI in 1999.

For adults and children:

Basic Health program (BH): Because the BH program is currently enrolled at capacity, we assume that uninsured individuals do not have current access to the program. However, we consider two alternative scenarios: full funding of BH, and planned funding through the next biennium. Under full funding of BH, all adults and children are eligible if family income adjusted for childcare costs (as described earlier) is less than or equal to 200 percent of poverty. Under planned funding through the next biennium, an additional 50,000 persons could be accommodated in the program. We probabilistically designate uninsured adults and children who are not otherwise eligible for a public program to allow an additional 50,000 enrollments in the BH program to represent this scenario.

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Estimating Adjusted Relationships

In many of our analyses we show the simple bivariate relationship between an outcome (such as having insurance) and a characteristics of the individual (such as age) and an adjusted relationship. The simple bivariate relationship shows the effect of the variable under study and all variables associated with it. For example, if older individuals are in poorer health and have lower income than younger persons, then the bivariate relationship between having insurance and age would also reflect the effect of income on having insurance and the effect of health on having insurance. The adjusted relationship controls for all of the other variables to show the marginal effect of the characteristic under study, in this example, age. To do this, we fit dichotomous models (using logistic or probit regression) to explain the outcome of interest (for example having insurance), as a function of all characteristics that we think are associated with it. To measure the adjusted effect of a variable, say age, we use our fitted relationship to predict the outcome for everyone in the population as if they were all young, and we average these predictions to obtain an adjusted measure for the young. This shows what we expect the outcome would be if all of the young had the same distribution of other characteristics (say income and health) as the population as a whole. We then predict the outcome for everyone in the population as if they were all old, and average these predictions for the adjusted measure for the older population. Again, this shows the expected outcome for older persons if they all had the same distribution of characteristics of the population as a whole, and so the same distribution of characteristics in our population for the adjusted measure for the young. The comparison of these two predicted average outcomes then shows the difference in the outcome for the young and old after controlling for all other factors.

Index of Access to Affordable Coverage

We developed an index of affordability for each sample person and family in the survey. The goal of this effort was to assess how many uninsured families have access to affordable coverage and the characteristics of the uninsured that do and do not have such access. Thus, this differs somewhat from the purpose of the affordability analysis which measures the income needed for a typical family to afford various types of coverage in the state. Our procedures and assumptions in general, however, follow those described in the affordability analysis (Please see the attached Affordability Appendix). We modified some of the affordability analysis methods to incorporate specific information we had about each individual and family from the survey that cannot be accounted for in looking at an average or typical family.

We linked the Pearce self-sufficiency standard (Pearce & Brooks, 2001) to each family in the survey based on the family composition and the county of residence. The Pearce standard is developed for 70 distinct family types based on the age and number of adults, and the age and number of children in the family. The 70 types consider all possible family configurations with up to 3 children. For families with more than 3 children, we calculated the marginal cost per child in each of the four age groups considered in the Pearce model (infant, preschooler, school age, teenage) based on the difference in cost for a 2 adult family with 2 children in the age group and a 2 adult family with 1 child in the age group. This marginal cost per child of a given age was then used to increment the standard to account for families with more than 3 children. We use the Pearce model to measure the family needs for all non-health related expenses. Because the survey was taken in 2000, we adjusted the Pearce standard from 2001 to 2000 dollars using the consumer price index.

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Premium costs for the best option available to the individual or family were then calculated as follows:

For those eligible for Medicaid, CHIP, GAU of SSI-related programs, Children's Health Program, and State Family Assistance programs, the individual cost for insurance is set to zero.

For all other individuals, we establish a premium for the family based on the best option for each family member. For those eligible for BH, premiums are based on the sliding income scale for the lowest premium plan, to correspond to the assumptions of the affordability analysis. For those who have access to an employer health plan, we used the employee's share of the cost for self-only coverage or family coverage as appropriate using the required contributions from the 1997 RWJF Employer Health Insurance survey employer to which the workers in the family were linked (as described earlier). These premiums were adjusted to 2000 dollars using the medical component of the consumer price index. We used this specific detail, rather than use the average costs for a small employer as applied in the affordability analysis, because we want to account for differences in premium costs and employer contribution share across business sizes and industry.

For persons who are not eligible for a public insurance program and do not have access to employer-sponsored coverage, we used a premium schedule for the purchase of either individual insurance or WSHIP insurance. The premium schedules vary by the age and number of adults in the family purchasing in this market, and by the size of the family and accord with the premiums for this program assumed in the affordability analysis. Persons reporting that they are in fair or poor health are given a WSHIP premium; others are given the individual market premium. Current tax law permits self-employed persons to deduct up to 50% (in 2000) of the cost of their individual health insurance premiums, even if they do not otherwise itemize deductions. This effectively lowers the price of insurance to .5*Premium+(1-marginal tax rate)*.5 Premium. We used information on marginal tax rates for single person families and other families by level of total family income from the U.S. Statistical Abstract to make this adjustment for the premiums for self-employed persons and their family members.

To accord with the affordability analysis, we assumed three different health statuses and we adopted levels of total spending and out-of-pocket spending that are consistent with the affordability analysis. The healthy in our analysis are those who report health status of excellent: they are assumed to have no medical care costs. Those in average health are those reporting health status to be very good or good. The sick are those who report health to be fair or poor. We assume a total level of annual insured spending for health care services in 2001 dollars for those in average health as follows:

Under age 19: $1471

Age 19-25: $2254

Age 25-34: $2724

Age 35-44: $3165

Over age 44: $5494.

These total spending assumptions accord with the out-of-pocket spending and cost-sharing assumptions for individual coverage in the affordability analysis. We assume the sick have total spending that is three times this level. We adjust the 2001 dollars to 2000 dollars for our affordability index for persons in the 2000 survey.

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To determine out-of-pocket spending for those with access to employer coverage, we use measures of the actuarial value of the plan offered by the employer to which the workers in the family are linked. The actuarial values are measures that were developed for each plan offered by employers in the 1997 RWJF Employer Health Insurance Survey based on detailed information about the plan benefits. Again, we do this in order to take account of differences in benefits offered by large and small employers and across industries. The actuarial value is an estimate of the share of medical spending that would be reimbursed by the plan; the individual's out-of-pocket share is one minus the actuarial value. This latter share is then multiplied by spending to determine out-of-pocket payments for health services. For the person in average health, we use the actuarial value for the average person. For the sick person, we use the actuarial value for persons in the top 25 percent of the expenditure distribution in order to take into account a higher expected actuarial value as spending increases because of the lower weight of deductibles and because of out-of-pocket limits on spending.

For all other plans, we used the same assumptions employed in the affordability analysis.

Our index of affordability is then measured as follows: For individuals eligible for Medicaid, CHIP, GAU of SSI-related programs, Children's Health Program, and State Family Assistance programs who do not have premium payments or out-of-pocket cost-sharing, the affordability index is set to 1. For all other persons, we compare the Pearce monthly requirements for non-health spending for the family plus the monthly family premium payments for the best option available to family members plus the average monthly out-of-pocket payments for all family members to the family's monthly income. If family income is greater than the monthly requirement for non-health spending and health spending, then the index is set to 1; otherwise it is set to zero.

The affordability index is not an index of likelihood of purchase because it does not account for other priorities of the family, risk aversion, or attitudes about health insurance or health care. Nonetheless, it does discriminate quite well between those who do and do not have coverage; among those who purchase insurance, 91.5 percent are measured to have access to affordable coverage. Among the uninsured, only 58.5 percent are measured to have access to affordable coverage (including public insurance).

The index looks at whether family income is sufficient to cover non-health care and health care resource requirements given the best insurance option. However, it does not take into account that individuals are likely to incur medical costs even without insurance, and so their direct payments for medical care may be lower with insurance; they may have more income left to pay for other needs. Therefore, we also looked at a variant of the index in which we measure the cost of insured health care as the premium less any savings in out-of-pocket spending from purchasing insurance. We then compared the Pearce standard for non-health care plus the cost of insured health care to the family income. This index requires a measure of expected payments for medical care if uninsured. To obtain this, we assumed that spending by the uninsured is 75 percent of insured spending; this is based on a large body of literature that looks at differences in use by the insured and uninsured. This literature obtains a wide range of estimates, but 75 percent represents a reasonable mid-range of the estimates. We also assumed that a family would not pay more than 25 percent of its income out-of-pocket for care, even if uninsured; if incurred expenditures exceed this amount the family is assumed to seek charity care. In the aggregate, our conclusions are not very sensitive to the use of this alternative measure. Using the alternative measure, 61.4 percent of the uninsured have affordable coverage, in contrast to the 58.5 percent mentioned above. However, as we would expect, taking into

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account the savings in out-of-pocket payments in our measure does affect differences in affordability by health status, as reported in the text.

Estimating Supply Premiums for Workers not Offered Insurance

We are interested in looking at whether workers in businesses that do not offer health insurance face higher premiums for group coverage than workers in business that do offer coverage. We do not observe these premiums directly, but we can estimate the supply premium based on data about premiums paid for workers in businesses that do offer coverage and how those premiums vary with characteristics of the business and its workers. We assume that premiums are given by the relationship:

Premium = Z g + e.

If we know this relationship, we can then impute premiums that would have to be paid for workers in businesses that do not offer insurance.

However, because we only observe premiums for those who offer insurance, if we estimate this relationship on the data available to us, we must take account the potential selection bias; the equation can not typically be consistently estimated using ordinary least squares. But consistent estimates of g can be obtained using the two-stage estimation procedure suggested by Heckman (1979). For the two-stage procedure, we first estimate the selection equation that distinguishes those who do and do not offer insurance as a probit model given by:

Pr(Offer Insurance) = F (X a + Z g b), .

where the X are characteristics that are assumed to directly affect the decision to offer insurance and the Z are characteristics that affect premiums (and some may also be in the X vector). Conditional on offering insurance and observing premiums, the premium equation is:

(Premium| Offer Insurance) = Z g - d [f(W)/F(W)] + v,

where W = X a + Z g b , - d [f(W)/F(W)] = E(e|Offer Insurance), d= cov(e, h), and E(v)=0. The two-stage estimation procedure involves fitting the reduced selection equation to obtain estimates of W, which are used along with the observed Z to estimate g, and d in the premium equation. To estimate the equations, we assumed the following variables are in the X vector (that is, they directly affect the offer of insurance): industry, firm size, the age mix of workers, whether union employees, the gender composition of workers, the work hours composition of employees, whether a seasonal business, and the amount of turnover in the workforce. Characteristics assumed to affect premiums but not the offer include the number of years in business and whether ever denied coverage.

We then estimate predicted premiums for those not offering insurance as :

Premium | Doesn't Offer Insurance = Z g* + d*[f(W*)/{1-F(W*)}] + v,

where v is drawn from a normal distribution with mean 0 and variance and is estimated as the residual variance from fitting the premium equation. For a further discussion of this technique for estimating offer premiums see Marquis & Louis (2001).

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Washington State Planning Grant on Access to Health Insurance

Background for Potential Future Improvements in WSPS
(Excerpted from draft consultant report on Data for Assessing Access to Health Insurance Coverage in Washington State) *

Dynamics of uninsurance. Measures related to dynamics of coverage, such as the duration of uninsured spells, identification of events leading to loss of coverage, and eligibility for COBRA coverage, are best measured through true longitudinal surveys (i.e., where the same individuals are interviewed repeatedly over time). To limit costs associated with such an approach, our consultants suggest that there may be utility in experimenting with alternative formulations of history questions. For example, respondents could be walked through a simple a set of questions geared to tax respondent memories the least. An example battery of questions would include:

For respondents with coverage:
Q1. Was there any time in the past 12 months, that is since <MONTH/YEAR>, when you had <u>no</u> health coverage from any source?   <If Yes to Q1> For how many months in the past year, that is since <MONTH/YEAR>, were you without coverage?   Q2. Alternative Q2. <If Yes to Q1> Were you without health coverage at any time in the <u>past six months,</u> that is since <MONTH/YEAR>?
For uninsured respondents:
Q3. Have you ever been covered by any type of health plan?   Q4. <IF YES to Q3> When was the last time you were covered by any type of health plan? (CODE Month and year)

This series has several potential advantages to the earlier WSPS coverage history question:

- The suggested questions are tailored based on the current coverage of the respondent, which will make them more salient.

- The suggested questions use a recall period that ends on the day of the survey, and thus is more recent.

- The questions insert dates as memory aides.

- The questions ask respondents for easier-to-recall answers. For example, respondents are asked if they were without coverage in the prior year before being asked for the number of months without coverage. This is a cognitively simpler task. Asking for number of months is complex in any case, and the alternative formulation of Q2 may elicit more accurate responses (but yield less rich data).

If additional data collection resources become available, a longitudinal or panel component could be added to the WSPS. In a panel design a sample of respondents would be re-interviewed periodically.

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For instance, three re-interviews might be done at four-month intervals to capture information about changes in coverage over a year.

Reasons for uninsurance. The WSPS asks respondents to provide the "main reason you do not have health insurance?" Open-ended questions like this one provide data of limited value while asking specific questions about attitudes, values or preferences may yield data of greater value. Focus group work could be used to test which coverage-related attitudes seem most important in coverage decisions among populations in Washington, but the following lists some potentially fruitful attitudes:

- Level of comfort using safety net services (i.e., free or discounted care, public clinics, etc.)
- Level of comfort using the emergency room for routine care
- Level of comfort enrolling in public health coverage
- Belief that physicians will treat even those who cannot afford to pay
- Belief that health coverage is only necessary during episodes of health care need
- Belief that it is easy to obtain coverage when it is needed
- Beliefs that mainstream medical care is often not effective or that self-treatment often is better
- Degree of dislike of using health care or taking medicines
- Belief that one's health is mostly within one's own control (e.g., through better health-related behavior)
- Belief that one's health is a matter of fate (e.g., that illness is "God's will")
- Belief that one's health is largely a matter of random chance
- Level of stoicism (e.g., "I only go to the doctor when things get bad.")
- Perceived propensity to take risks with one's health or finances.

Once the most promising attitudes are identified, simple closed-ended questions can be crafted with scaled answers (e.g., strongly agree, somewhat agree, somewhat disagree, strongly disagree). One drawback of administering such questions in surveys like the WSPS is that they can only be asked of the respondent, and respondents may have systematically different characteristics than other household members. Respondents, however, provide answers that reasonably proxy the attitudes of all family members.

Measuring uninsurance. Measuring health insurance coverage is difficult and there is a lack of expert consensus on the best strategy. Our consultant team agreed that WSPS methods are sound, and should not be changed on the whole. Nevertheless, two points are worthy of consideration.

- The FHIS, then the NSAF, and more recently the CPS, adopted a question verifying lack of insurance coverage. In this scheme, a verification question is asked for each person in the household for whom no coverage is reported. This strategy reduces estimates of the uninsured by a small margin. Whether resulting estimates are more accurate is unknown. Nevertheless, with the adoption of these questions by the Census Bureau in the CPS, verification questions are becoming standard practice. (A verification question has been included in WSPS 2002 which is being fielded February through April 2002.)

- In instances where more than one source of health coverage is identified for an individual in the WSPS, a question about which is the "primary source" is asked. This question is of limited analytic value because individuals generally do not understand complex coordination-of-benefits provisions of health plans. Rather, it may be better for data analysts

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to impose a hierarchy of coverage, where employer-based is assumed to be the primary payer when such coverage is held, other private coverage is next, and so forth. If this strategy is taken, primary-source-of-coverage questions can be dropped from the WSPS questionnaire, saving a modest amount of interview time.

Improve WSPS Response Rate. There is consensus within the survey research industry that achieving high response rates is becoming more difficult, and as health reform has receded from the national agenda, fewer people are willing to respond to health-related surveys. Nevertheless, compared to other surveys of its type, the WSPS has a somewhat lower response rate than other surveys and the rate declined significantly between 1998 and 2000. Although there is no absolute minimum standard for an acceptable response rate, the 2000 rate was below 50 percent, which leaves considerable room for non-response bias.

Although strategies for improving response rates can be quite costly, there are several promising avenues that could be considered:

- paying respondents monetary incentives to participate (either initially, for answering machine messages, or for refusal conversion). Unfortunately paying response incentives is costly (e.g., a $25 response incentive for 7,000 respondents would cost over $175,000 plus administrative costs), although most non-federal health surveys now do so. One cost-saving option is to pay incentives only to reluctant cases for "refusal conversion," but this strategy can be risky if it becomes known that some respondents are being paid while others are not.

- using professional interviewers (especially for convincing reluctant respondents to participate), and

- lengthening the survey field period. Under this strategy, the number of times sampled households are contacted would be increased to 15 or more. Cases where potential respondents appear reluctant to participate, but do not refuse to do so outright, can be set aside for several weeks prior to re-contact. This approach is less irritating to respondents and may reduce contacts during times during which participation can be particularly difficult. WSPS sponsors may wish to conduct small-scale, randomized response rate experiments to determine the most cost-effective means of improving response rates.

Another strategy for improving response rates over time, which can also cost-effectively enhance the precision of estimates, is to re-interview respondents from one round of the WSPS in the next round. Persons interviewed once are generally considerably more willing to participate in a second round of the survey than are new contacts. The CTS and NSAF use this method. The re-interview group consists of households that stayed at the same address from one survey to the other. However, this approach has drawbacks that need to be considered:

- the resulting sample cannot be used for longitudinal analysis because it is not representative of the wider population and new households are also recruited to the sample in each wave.
- although potentially cost-effective, this strategy requires complex sampling design and data weighting strategies and advanced analysis software.

Reduce Telephone Non-Coverage Bias. The WSPS is conducted by telephone. Households without phones have systematically different health-related characteristics than those with phones, which can lead to bias of survey estimates based only on telephone interviews. Many telephone surveys, including the NSAF and CTS, include small face-to-face interview samples for groups without telephones. This strategy may be effective in reducing bias that results from excluding

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households without telephones but it is expensive. An alternative, more cost-effective strategy, is to adjust survey estimates based on respondents' telephone coverage history. The adjustment is accomplished by adding one more question to the survey about telephone coverage history, then "up-weighting" households with recent gaps in telephone coverage. Since households without phones in the recent past are very much like households without telephones during survey data collection, this strategy effectively compensates for excluding the latter group from the survey sample.

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